CZECH REPUBLIC

COUNTRY PROFILE

**IMPLEMENTATION OF AGENDA 21:
REVIEW OF PROGRESS MADE SINCE THE
UNITED NATIONS CONFERENCE ON
ENVIRONMENT AND DEVELOPMENT, 1992**

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CZECH REPUBLIC

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All statistics are rendered as provided by the respective Governments.

TABLE OF CONTENTS

		Page
ACRONYMS		ii-iii
OVERVIEW		iv-x
FACT SHEET		xi
AGENDA 21 CHAPTERS		
2.	International cooperation to accelerate sustainable development in developing countries and related domestic policies	1-2
3.	Combating poverty	3-4
4.	Changing consumption patterns	5-8
5.	Demographic dynamics and sustainability	9-11
6.	Protecting and promoting human health	12-13
7.	Promoting sustainable human settlement development	14-15
8.	Integrating environment and development in decision-making	16-18
9.	Protection of the atmosphere	19-20
10.	Integrated approach to the planning and management of land resources	21-22
11.	Combating deforestation	23-24
12.	Managing fragile ecosystems: combating desertification and drought	25-26
13.	Managing fragile ecosystems: sustainable mountain development	27-28
14.	Promoting sustainable agriculture and rural development	29-31
15.	Conservation of biological diversity	32-33
16.	Environmentally sound management of biotechnology	34-35
17.	Protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources	36-40
18.	Protection of the quality and supply of freshwater resources: application of integrated approaches to the development, management and use of water resources	41-42
19.	Environmentally sound management of toxic chemicals, including prevention of illegal international traffic in toxic and dangerous products	43-44
20.	Environmentally sound management of hazardous wastes, including prevention of illegal international traffic in hazardous wastes	45-46
21.	Environmentally sound management of solid wastes and sewage-related issues	47-48
22.	Safe and environmentally sound management of radioactive wastes	49
23-32.	Major groups	50-55
33.	Financial resources and mechanisms	56-58
34.	Transfer of environmentally sound technology, cooperation and capacity-building	59-60
35.	Science for sustainable development	61
36.	Promoting education, public awareness and training	62-63
37.	National mechanisms and international cooperation for capacity-building in developing countries	64
38.	International institutional arrangements	65
39.	International legal instruments and mechanisms	66
40.	Information for decision-making	67-68

ACRONYMS

APELL	Awareness and Preparedness for Emergencies at Local Level
CFC	chlorofluorocarbon
CGIAR	Consultative Group on International Agriculture Research
CILSS	Permanent Inter-State Committee on Drought Control in the Sahel
EEZ	exclusive economic zone
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ELCI	Environmental Liaison Centre International
EMINWA	environmentally sound management of inland water
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the United Nations
GATT	General Agreement on Tariffs and Trade
GAW	Global Atmosphere Watch (WMO)
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System (UNEP)
GEMS/WATER	Global Water Quality Monitoring Programme
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Pollution
GIPME	Global Investigation of Pollution in Marine Environment (UNESCO)
GIS	Geographical Information System
GLOBE	Global Legislators Organisation for a Balanced Environment
GOS	Global Observing System (WMO/WWW)
GRID	Global Resource Information Database
GSP	generalized system of preferences
HIV	Human Immunodeficiency Virus
IAEA	International Atomic Energy Agency
IAP-WASAD	International Action Programme on Water and Sustainable Agricultural Development
IARC	International Agency for Research on Cancer
IBSRAM	International Board of Soil Resources and Management
ICCA	International Council of Chemical Associations
ICES	International Council for the Exploration of the Sea
ICPIC	International Cleaner Production Information Clearing House
ICSC	International Civil Service Commission
ICSU	International Council of Scientific Unions
IEEA	Integrated environmental and economic accounting
IFAD	International Fund for Agricultural Development
IGADD	Intergovernmental Authority for Drought and Development
IGBP	International Geosphere-Biosphere Programme (ICSU)
IGBP/START	International Geosphere-Biosphere Programme/Global Change System for Analysis, Research and Training
ILO	International Labour Organisation
IMF	International Monetary Fund
IMO	International Maritime Organization
INFOTERRA	International Environment Information system (UNEP)
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IPCS	International Programme on Chemical Safety
IPM	integrated pest management
IRPTC	International Register of Potentially Toxic Chemicals
ITC	International Tin Council
ITTO	International Tropical Timber Organization

ACRONYMS (Cont'd)

IUCN	International Union for Conservation of Nature and Natural Resources
MARPOL	International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PGRFA	plant genetic resources for agriculture
PIC	prior informed consent procedure
SADCC	South African Development Co-ordination Conference
SARD	sustainable agriculture and rural development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Coordinator
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNU	United Nations University
WCP	World Climate Programme (WMO/UNEP/ICSU/UNESCO)
WFC	World Food Council
WHO	World Health Organization
WMO	World Meteorological Organization
WWF	World Wide Fund for Nature (also called World Wildlife Fund)
WWW	World Weather Watch (WMO)

National acronymns

CR	Czech Republic
CSU	Czech Statistical Office
CZK	Czech Crown
Geofund	
LFA	
Mze	Ministry of Agriculture of CR
UHUL	Institute for Economic Forest Management
VUZE	Agricultural Economy Research Institute

OVERVIEW

1. Introduction

In June 1992, the former Czechoslovakia, as many other countries participating at the Rio Conference, signed the relevant documents, especially Agenda 21. After the division of Czechoslovakia (1992-93), the present Czech Republic, as one of the two successor states, acknowledges most of the laws, international commitments, signed and ratified conventions, protocols etc. in the field of environmental protection which were agreed and settled upon not only between 1990-1992 but also before 1990 by the former Czechoslovakia. With respect to the development launched by the UNCSD, it must be stated that the Czech Republic fully acknowledges this activity and in the frame of its possibilities takes part in the relevant activity of this UN body.

The prevailing opinion between experts concerning the implementation of the 40 chapters of Agenda 21 under the conditions of the Czech Republic can be characterized as a moral task and a voluntary set of commitments, which cannot be omitted, but also not enforced in its general form as a national legislative measure. Thus, it does not have the same status as e.g. the UN Framework Convention on Climate Change or the Convention for the Protection of the Ozone Layer, etc. Most convenient is to consider Agenda 21 as an umbrella document, the individual chapters of which can be implemented only gradually in a rather broad time scale.

Agenda 21 was translated and published in Czech in a somewhat abbreviated form together with the UN Framework Convention on Climate Change and the Convention on Biological Diversity. At the moment discussions are going on to prepare a complete translation under the financial auspices of the Ministry of Environment of the CR.

2. Progress in the implementation of sustainable development at governmental level

Up to now the Czech Republic did not officially prepare a national Agenda 21 *sensu stricto*. Nevertheless, there exists an equivalent plan of a long-term strategy of environmental protection and sustainable development which is based on Act No. 17/1992 Coll. on the environment dated December 5, 1991. In its preamble this law speaks of "a human's right to transform nature in accordance with the principle of sustainable development", "the responsibility for maintaining a healthy environment for future generations" and of "the right to a favourable environment as one of the principal rights of a human being". In its §6, the act defines sustainable development according to the Brundtland concept. The "State Environmental Policy", approved by the Government of the Czech Republic on 23 August, 1995 is based on the above-mentioned act. This document includes not only short-term and medium-term objectives, but also long-term goals. Nevertheless, the protection of human health through the elimination of the impacts of harmful factors of a biological, physical and chemical nature and physical well-being, are permanent priorities. Both short-term and medium-term goals following from the contemporary state of the environment in the Czech Republic are subordinate to this long-term goal. Up to now it cannot be stated that problems in the CR, which should be solved according to sustainable development principles, are approached from ecological, economic and social viewpoints, as would be required. Integrating environment and development in decision-making has started. Currently, work is going on to formulate a second broader concept of the "State Environmental Policy" with respect to the gradually changing political situation.

3. Institutional, financial and organizational facilities for the implementation of sustainable development

The main institution in the CR responsible for the implementation of sustainability principles and elements at the governmental level is currently only the Ministry of the Environment of the CR (MoE), which was founded in December 1989. The Ministry has four sections: environmental policy, legislative issues, technical protection of the environment and nature and soil protection. This Ministry also coordinates a number of subordinate bodies which monitor the state of the environment, inspect the polluters and finance environmental protection projects:

- the Czech Hydrometeorological Institute (founded before World War II);
- the Water Research Institute (founded before World War II/
- the Czech Geological Survey (founded before World War II);
- the Czech Environmental Institute;
- the Agency for Nature Conservation and Landscape Protection;
- the Research Institute of Ornamental Gardening (founded before World War II);
- the Czech Environmental Inspection.

With respect to financial issues, it is necessary to mention the State Environmental Fund (SEF) which was established in 1991 as an additional financial resource for environmental protection. It operates in a similar way as in other countries. The financial resources originate partly from the National Property Fund as well as from fines, fees and other payments. This fund supports large projects on air and water protection, waste management, on nature, landscape and soil protection and also projects on alternative energy sources. E.g. in 1996, the SEF accepted 955 applications in a total amount of CZK 12.1 billion (approx. US$360 million) of which only about one third could be financed (about CZK 4.6 billion, about US$131 million). Several specific programmes exist which are in principle connected with sustainability: the Air Recovery Programme, Radon Programme, Programme of Revitalization of River Systems, Programme of Preservation of the Landscape and the National Ecolabelling Programme. At the beginning there were "voluntary agreements" of industrial companies with the State administration, introduction of programmes for "cleaner production", and the introduction of "environmental management systems".

The Environmental Remediation Programme was launched in 1993, and in the period 1993-1996, 473 projects were supported in a total amount of CZK 372.4 million (about 10.5 million USD). The main purpose of this programme is to support projects which serve the MoE in its decision-making. The MoE also supports projects in the framework of the programme "Science and Research" which begun in 1993, with five main branches: (I) environmental risk assessment; (ii) complex research of waters and watersheds; (iii) nature conservation and landscape protection, and (iv) geology. Finally, the support of various NGOs must also be mentioned. Yearly about 180 projects are financed from about 600 applications. In this way, e.g. in 1996, 17.1 million CZK were allocated (about $0.5 million USD). From this amount, about 10% of the projects are directly linked to the implementation of sustainable development.

In the Czech Republic there are several organizations which are monitoring the state and development of the whole country from the viewpoint of sustainability. At first the Czech National Commission on Sustainable Development (CN CSD), which was established in 1994 by uniting the former Commission for International Relations and the Advisory Board of the Deputy Minister and Director of Section on Environmental Policy - both bodies of the MoE CR. The status of the CN CSD was to support interministerial coordination of activities, preparation of an environmentally sustainable development strategy (State Environmental Policy), implementation of important environmental projects within the programmes of foreign assistance and the preparation of national environmental performance reviews. The Chairman of the CN CSD was the Deputy Minister and Director of the Section on environmental Policy, Mr. V. Bízek. The total number of members was 24 (9 - governmental bodies, 7 - universities, academic and research institutes, 5 - business, bank and production sector, 2 - NGOs and 1 - others). This commission was restructured in November 1996 and renamed "Commission for Sustainable Development and International Cooperation" with the same Chairman mentioned above, and 16 members. Due to its composition this body can be considered as an interministerial commission. About 3 members of this commission are responsible for sustainable development issues. This new body shall continue in its work with emphasis on the following fields, closely related to problems of sustainability: (I) state environmental policy; (ii) influence of economic instruments; (iii) education and public awareness, and (iv) organization of workshops in cooperation with the UN CSD.

A second body is the Commission for the Environment of the Czech Academy of Sciences, the main mission of which is to contribute to a more extensive application of scientific knowledge in the forming of future environmental policies in the spirit of Agenda 21, further to present relevant results to the public in a generally understandable way. The Council has about 25 members, mostly from universities, academic and research institutes, but also from the Ministry of the Environment. The history of this Council goes back to the 70's; after the political changes in 1989, it was reorganized.

A third organization is the Charles University Environmental Centre led by the first environment minister of the CR, Prof. B. Moldan. This body concentrates its activity almost completely on problems of sustainability implementation mostly in the field of strategy, indicators of sustainable development, philosophy, etc.

The Society for Sustainable Living, founded in 1993, is an NGO with several hundred members mostly with more or less intellectual profile. It engages in ecological problems and associated disciplines in the spirit of the Rio agreements, however, from a very broad viewpoint, including biology, ecology, medicine, chemistry, technical sciences, legislative issues, sociology, philosophy, art, etc., which have relevance to the sustainable development principles.

The Czech Business Council for Sustainable Development, founded in 1993, is a body established by a number of Czech industrial companies, the main mission of which is to become a leading business advocate for issues regarding sustainable development, to demonstrate and share progress achieved in environmental management in businesses and finally to spread results achieved in environmental protection, energy efficiency, sustainable resource management and to prevent air, water and soil pollution as well as waste production. It cooperates also with the World Business Council for Sustainable Development.

The mentioned five bodies and several other NGO's (e.g. Children of the Earth, the Green Circle etc.) try to initiate the process of sustainable development in the Czech Republic. This task is in our conditions a very slow and not at all a simple process similarly as in most other countries of the CEEC region. In the Czech Republic specifically, the first governmental institutions dealing with environmental problems as a whole were founded only after 1989. The deep political and economic changes, the problem of the division of former Czechoslovakia had, and still have, naturally the priority attention of the government and of the majority of the population.

4. Achievements in the field of sustainability implementation - improvement of the environment quality

With respect to the development of the Czech economy in the last seven years and due to the implementation of environmental protection measures which implicitly include the Agenda 21 principles, the following major achievements in our country can be identified:

- Air quality improvement (Chapter 9 of Agenda 21)
  The total emissions of principal pollutants from stationary sources (sulphur dioxide, nitrogen oxides, carbon monoxide and hydrocarbons) were reduced in the 1992-95 period by about 19 per cent. At the same time, emissions of particulate matter were reduced by about 36 per cent.

- Reduction of the share of the Czech Republic on climate change (UN FCCC and Montreal Protocol)
  The total emissions of carbon dioxide, the main greenhouse gas, decreased in the 1992-95 period by more than 8 per cent, in the period 1990-95 by about 24 per cent. The consumption of substances depleting the ozone layer decreased between 1992-95 by about 84 per cent.

- Increase of the quality of surface and ground waters (Chapter 18 of Agenda 21)
  The total amount of discharged waste water decreased in the period 1992-95 by more than 13 per cent, the amount of treated waste waters increased in the same period by nearly 8 per cent. The overall discharged pollution thus decreased by more than 9 per cent. The trend in ground water quality has an increasing tendency.

- Decrease of the negative impacts of environmentally hazardous factors on the health of the population (Chapter 6 of Agenda 21)
  The health risks caused by pollutants in the air, water and foodstuffs show a decreasing tendency. The overall assessment of the quality of drinking water based on 250,000 analyses performed in 1994, exceeded only in 0.85 per cent of cases unacceptable values.

- Decrease of the negative influence of mining and quarrying on the state of the geological environment (Chapter 10 of Agenda 21)
  The overall mining area decreased by 24 per cent. Measures were begun to eliminate the negative consequences of uranium mining by chemical leaching technologies.

- Reduction of the total number of operated waste dumps and the increase of the fraction operated in compliance with the new waste legislation (Chapters 20, 21 and 22 of Agenda 21)
  The overall number of waste dumps in operation decreased in the 1992-95 period by more than 37 per cent, the fraction of waste dumps (landfills) operated in compliance with the new waste legislation was 23 per cent in 1995.

- Stabilization of the overall forest damage by air pollution (Chapter 11 of Agenda 21)
  In the period 1985-1995, the fraction of forests damaged to some extent by air pollutants increased from 40.5 per cent in 1985 to 60.8 per cent in 1992 and up to 1994 there was an increase to 64.4 per cent, whereby 58.4 per cent were damaged only slightly (up to 5 per cent of strongly damaged trees) and 6 per cent strongly.

The main causes for the above-described positive development features are:

- the transformation process of the national economy;
- high overall expenditure for the protection of the environment (presently an equivalent of about 2.5 per cent of GDP both from governmental, private and semiprivate sources);
- implementation of the state environmental policy;
- active and positive approach of the governmental, municipal, business and industrial sphere and of course the activities of the NGO's.

5. Critical and main issues - principles, priorities and time scales

The above-mentioned State Environmental Policy identifies several priority levels of sustainability which are based on the following principles: (I) the precautionary principle; (ii) the polluter-pays principle; (iii) the technical feasibility principle; (iv) the substitution principle and (v) the critical load principle.

With respect to priorities, there can be distinguished three groups - short, medium and long-term priorities:

a) Short-term priorities (up to the year 1998):

- Improving air quality through further reduction of harmful emissions;
- Improving water quality by limiting pollution discharges;
- Reduction of the production of waste, especially hazardous waste;
- Eliminating the impact of harmful physical and chemical factors;
- Remedying previous environmental damage ("old burdens").

The evaluation of the quality of the environment in the CR between 1989-1994 indicates that from a geographical perspective, the priority problem areas (hot spots) continue to be concentrated in Northern Bohemia, Northern Moravia and in the Capital City of Prague.

b) Medium-term priorities (up to 1999-2005):

- Creating land use provisions safeguarding efficient protection of the individual components of the environment;
- Increasing the water retention capacity of land;
- Continued reclamation of areas devastated by extensive mining activities.

c) Long-term priorities (post 2005):

- Climate protection;
- Protection of the Earth's ozone layer;
- Conservation and reestablishing biological diversity and thus renewing the ecological equilibrium of the landscape.

Priorities in science and technology and in the area of foreign relations can be further distinguished. Nevertheless, in concluding this chapter, it must be repeated that the interconnection between environment and development important for decision-making is up to now not seriously considered.

6. Implementation of principles of sustainability - case studies

Despite that in the CR the whole implementation process of sustainability principles is at its beginning, several examples of successful projects, case studies and stories can be given.

An important issue for the CR is the Dobris Process, which begun in former Czechoslovakia due to the initiative of Mr. J. Vavroušek, the first Czechoslovak federal Minister of the Environment, who in June 1991 organized the first Pan-European conference of environment ministers at Castle Dobris near Prague. This process which is linked with the implementation of sustainable development in the European scale continued in 1993 in Luzern, and in 1995, in Sophia. In 1998, the ministerial conference shall take place in Aarhus, in Denmark. One of the most remarkable results of the Dobris Process is the first, and up to now, unique publication "Europe's Environment".

Worth mentioning are activities going on in the field of education and public awareness, e.g., the project financed by the Ministry of the Environment of the CR entitled "Education Programme for Environmentally Sustainable Development" (1 million ECU from September 1995 to December 1996). It consists of three subprojects: (I) Services for pedagogical universities; (ii) Preparation of text books for technical and other universities and (iii) Raising public awareness. In this context, about 60 text books were edited and published in 1,500 - 3,000 copies. In the list of these publications also the new report of the Club of Rome, Factor 4 by E.U. von Weizsäcker, A.B. and L.H. Lovins is included.

The Czech Commission on Sustainable Development organized in the last two years in cooperation with the UN CSD's two workshops: one on economic instruments for sustainable development and the second on education and public awareness. It should also be stated that a number of internationally well known and famous books closely connected or directly dealing with the problem of sustainable development were translated and published in the CR, mostly with the financial support of the Ministry of the Environment of the CR. Furthermore, in the CR, a number of periodicals is published which now and then inform the reader also on problems of sustainable development (Planeta - Planet, NIKA - NICHE, Ochrana ovzduší - Air Protection, Vodní hospodářství -Water Management, etc.).

From a practical point of view, two examples of successful case studies can be given. The first is a systematic revitalization project of a Submountain headwater landscape in the surrounding of Senotín located in southern Bohemia, in the border region of the CR and Austria. It is based on a holistic bio- and socio-environmental approach to landscape management. Here the landscape revitalization is understood as the implementation of Agenda 21 principles at a more or less local scale. This project is also a result of Czech-Austrian cooperation.

The second practical example deals with the application of sustainability principles in the field of energy management. It is the design and creation of a multiple energy source for heating a reconstructed old building once used as a sawmill also located in southern Bohemia. The energy source equipment consists of water turbines, heat pumps using water of different temperature, solar collectors and absorption walls exposed to solar radiation. Interesting is the fact that the project was finished in the period 1978-1982.

7. Activities in the field of local governance

A number of experts and even whole organizations are presently coming to the conclusion that the implementation of sustainability principles is most easily accomplished at a local level of environmental management. In the CR there exist several enlightened local authorities which strive to manage their community in an environmentally sustainable way, e.g. in Děčín (especially sustainable energy sources), Žďár nad Sázavou (waste management), Český Krumlov (environmental management in a town proclaimed by UNESCO as a site with world wide importance as a cultural and historical heritage), Mikulov (in cooperation with environmentally oriented NGO's - development of ecotourism in a transboundary area). Most of these towns do not exceed 50,000 inhabitants.

A number of NGO's asking for support from the Ministry of the Environment are active in developing local agendas on the implementation of sustainability principles, especially in the field of ecological education and raising public awareness, nature conservation and sustainable development as a whole (e.g. Czech Union of Nature Conservation - Branch Veronica in Brno).

An important information measure for local management of environmental and sustainability problems is the translation and publishing of the "ICLEI's Guide to Environmental Management for Local Authorities in Central and Eastern Europe" (ICLEI = The International Environmental Agency for Local Governments, Freiburg, Germany). This compendium will comprise about 18 volumes covering all relevant aspects of the discussed problems. Their concept is based on the application of Agenda 21.

8. Activities concerning global governance

The Czech Republic's attitude towards the solution of global environmental issues, especially as it became member of the OECD (since December 1995) and associated member of the EU (application submitted in spring 1996), recognizes in an increasing scale the environmental and sustainability recommendations of these organizations. The approximation process towards full membership in the EU which started in 1996 inherently contains commitments and legislative measures which should be to a great extent in compliance with the principles of sustainable development.

After foundation of the UN CSD, the former first Czech Environment Minister, Mr. B. Moldan, was nominated and elected as one of the Vice-chairmen of this UN body. From this position a number of activities evolved, especially the organization of the workshops mentioned at the beginning of this report.

Former Czechoslovakia signed (1984) and ratified (1984) the Convention on Long range Transboundary Air Pollution (CLRTAP) and signed and ratified all the relevant Protocols (EMEP, Sulphur Dioxide I and II, Nitrogen Oxides and VOCs).

The CR as a country listed in Annex I of the UN Framework Convention on Climate Change submitted in 1994 its first national report to the secretariat of this convention. In 1995, the emissions of carbon dioxide decreased by about 24 per cent in comparison with 1990. In June 1997, the CR submitted its second report to the UN FCCC secretariat, about eight months before the official deadline (15 April 1998).

Former Czechoslovakia signed (1990) and ratified (1991) the Convention for the Protection of the Ozone Layer. At the same time, it also signed and ratified the Protocol on Substances that Deplete the Ozone Layer (the Montreal Protocol). The consumption of the most efficient ozone depleting substances (CFCs, so called "hard freons") decreased from 5,514 tons in 1986 to zero tons in 1996. Thus, the CR is fully in compliance with the more stringent conditions of the London and Copenhagen Amendments to the Montreal Protocol valid also in the EU.

In 1989, former Czechoslovakia signed and later (1992) ratified the Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal. In 1995, at the Third Meeting of Parties to the Convention, the delegation from the CR supported an initiative by the EU and Scandinavian countries for complete prohibition of the export of hazardous waste from the OECD countries, which should be rapidly introduced through an Annex to the Convention. In 1991, Czechoslovakia signed the Convention on Environmental Impact Assessment (EIA) in a Transboundary Context. Ratification of this convention is expected after approval of new legislation on EIA in the CR.

The CR signed (1993) and ratified (1993) the Convention on Biological Diversity. In November 1995, a delegation from the CR participated at the Second Meeting of the Conference of Parties to this Convention where the Djakarta Ministerial Declaration and some other resolutions were passed which are designed for the implementation of the Convention in individual geographical regions. Otherwise, the CR is party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (signed 1992, ratified 1992) and its later Amendment, a party to the Convention on Wetlands of International Importance, especially as Waterfowl Habitats (signed 1990, ratified 1990) and its later Amendment. The CR also signed (1993) and ratified (1994) the Convention on the Conservation of Migratory Species of Wild Animals and is also a Party to the Agreement on the Conservation of Bats In Europe (signed 1993, ratified 1994).

Concerning financial issues of global environmental problems the CR is an active member of the GEF, it cooperates with the World Bank, etc.

9. Constraints and obstacles in the implementation of sustainability

Despite or maybe just because of the improving quality of the environment in the CR (especially air and water) and despite of a number of successful case studies and projects, the implementation of the Agenda 21 principles is up to now in the CR rather slow and only at its beginning. The prevailing majority of the public is aware of serious environmental problems, but the way of their solution is considered being only a more or less technical obstacle. For instance the problem of changing production and consumption patterns has up to now had little impact on the behaviour of the average citizen.

From a purely practical point of view the following serious obstacles in the implementation of sustainable development principles can be identified:

- The *per capita* emissions of sulphur dioxide, despite protective measures, are still very high in comparison with the average for the OECD countries. In 1994, the CR emitted 193 kg, and the OECD 98 kg *per capita* (average).
- 35 per cent of monitored water courses can be classified as highly or very highly polluted.
- A considerable part of the sewage system is not connected to any form of sewage treatment (in 1994 about 15 per cent).

- The percentage of forests damaged by air pollution is alarmingly high, the highest in Europe (in 1995, at least 60 per cent of forest areas was damaged to some extent).

- Old ecological burdens are a continuous risk for nature and human health (e.g. the abandoned mining of uranium ores by chemical leaching, old dumps of hazardous waste, construction materials with harmful chemicals and substances, etc.).

- Up to now endangered natural ecosystems were not able to benefit positively from improved air and water quality, e.g. the percentage of endangered or critically endangered species of flora and fauna is extraordinarily high.

- High frequency of fires, accidents or other extraordinary events harmful to the environment (e.g. in 1993-95 the number of accidents with petroleum products increased by about 60 per cent).

In concluding this part, it can be stated that the average representative of the government, of the industrial and business sector, the agricultural, public or even from the intellectual sphere is up to now not able to distinguish between simple environmental protection (which is understood rather well) and the implementation of sustainable development principles including a synergetic approach to environmental, economic and social issues. Instead, the classical extensive development of production and consumption patterns is believed to be infinite by the average citizen (industry, transportation, tourism, etc.). This concept has, at many gatherings, been declared and proven unfeasible.

This report was prepared on the basis of consultations arranged at the level of the Ministry of the Environment of the CR by the Department of Strategies and Environmental Statistics.

UNCSD - NATIONAL LEVEL COORDINATION STRUCTURE OF AGENDA 21 ACTIONS
FACT SHEET

CZECH REPUBLIC

1. **Key National Sustainable Development Coordination Mechanism(s) (e.g., Councils, Commissions, Inter-Ministerial Working Groups).**
Czech Environmental Institute - focal point CSD

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2. **Membership/Composition/Chairperson:**

2a. **List of ministries and agencies involved:**
Ministry of Environment
Ministry of Health
Ministry of Agriculture
Ministry of Foreign Affairs

2b. **Names of para-statal bodies and institutions involved, as well as participating of academic and private sector bodies:**
Centre for Environment, Charles University

2c. **Names of non-governmental organizations involved:**
Society for Sustainable Living

3. **Mandate/role of above mechanism/council:**

Submitted by:
(Name): Ing. Alexandra Orliková, CSc. **Signature:** Signed on behalf of Director.

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CZECH REPUBLIC

AGENDA 21 CHAPTER 2: **INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES (with special emphasis on TRADE)**

NATIONAL PRIORITY:

STATUS REPORT:

On the basis of Decision No. 153 of March 15 1995, the Government of CR approved the provision of foreign aid to developing countries and countries in transition: the Ministry of the Environment prepared 7 projects of bilateral cooperation (total amount CZK 24.8 million) and 8 projects of multilateral cooperation (total amount CZK 25.5 million) especially in the area of hydrology, meteorology and protection of the ozone layer - to be completed in 1997.

Cross-Sectoral Issues

1. **Decision-Making Structure:** No information.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS					

CZECH REPUBLIC

AGENDA 21 CHAPTER 3: COMBATING POVERTY

NATIONAL PRIORITY:

STATUS REPORT:

- Focus of national strategy

  Not applicable for CR.

- Highlight activities aimed at the poor and linkages to the environment

Cross-Sectoral Issues

1. **Decision-Making Structure:** No information.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

NB: Developed countries, where domestic poverty alleviation is not a major concern may wish to briefly describe their position regarding global poverty alleviation.

STATISTICAL DATA/INDICATORS

	1985	1990	1993	1994	1995	Latest 1996	
Unemployment (%)	0	0.76	3.5	3.2	2.9	3.5	
Population living in absolute poverty	0	0	0	0	0	0	
Public spending on social sector %	15.8[1]	51[2]	33[2]	36[2]	35[2]	32[2]	
Other data							

[1] from former Czechoslovakia national income used

[2] expenditure from CR national budget

CZECH REPUBLIC

AGENDA 21 CHAPTER 4: CHANGING CONSUMPTION PATTERNS

NATIONAL PRIORITY: Improve the efficiency of energy and material use

STATUS REPORT:

• National policy objectives/focus

After 1989, the transition to a market oriented system in the Czech Republic has been connected with the emulation of traditional consumption patterns of liberal market economics. That is why the State environmental authorities are supporting environmentally friendly goods and combating those that are environmentally harmful. There are different forms of such support, e.g. eco-labeling, taxing environmentally friendly goods at a lower rate of VAT, and other tax levying. On the other hand, environmentally unfriendly productions are penalized by emission charges and other economic instruments, like tax differentiations.

The Czech Republic considers the application of economic instruments an extremely important means to change production and consumption patterns, and is exerting constant efforts for broader implementation of these instruments. The country also hosted the CSD Intersessional Symposium on Economic Instruments for Sustainable Development in 1995. Through the use of economic instruments, attention is paid not only to the big polluters but also to households. Households are often located in urban areas with higher health risks of air pollution. For example, households have been subsidized to switch from (brown) coal to (natural) gas or another kind of cleaner fuel. (For more information on the use of economic instruments in the Czech Republic, see Chapter 33.)

In addition to economic instruments, an effective instrument has been the negotiation on voluntary agreements between the State administration and pollution producers. For example, in 1995, the Ministry of Environment concluded such an agreement with the Association of Manufacturers of Washing Powders for the gradual reduction of environmentally harmful substances from their products. As the first post-communist country to take the initiative, the Czech Republic introduced an eco-labeling programme in 1994. In 1995, 90 products had been granted the right to use an eco-label, and several of the responsible companies reported a significant increase in the sales of these products. In the near future, the Czech Republic's eco-labeling programme will be harmonized with that of the Member States of the European Union.

An institutional framework for the Environmental Management System for enterprises was established in 1996. Industries are encouraged to develop and introduce low-waste, low-emission, low-power and resource-saving technologies as well as closed production cycles and to manufacture environmentally friendly products. In addition, the manufacturers' responsibility for the life-cycle of their products will be gradually implemented.

Concerning environmental education and public awareness-raising, environmental aspects need to be incorporated into the education cycle at all levels. Improving public access to information and the collection of data on the environment are important factors in this process.

Cross-Sectoral Issues

1. **Decision-Making Structure:** No information.

2. **Capacity-Building/Technology Issues:** See status report.

3. **Major Groups:** No information.

4. **Finance:** See Chapter 33.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS

	1985[1]	1990	1992	1993	1994	1995	Latest 1996
GDP per capita (current prices, purchasing power parities) (US$)	4,368	4,976	6,969	8,013	9,125	10,500	11,200
Real GDP growth (comparative prices) (%)	3.0	-1.2	-6.4	-0.9	2.6	4.8	4.1
Annual energy consumption per capita (Kg. of oil equivalent per capita)	4,780	4,784	4,139	4,044	3,900	3,955	-
Motor vehicles in use (passenger cars per 1000 inhabitants	200.9	232.6	250.0	265.9	287.0	301.4	324.8
Other data							

[1] Former Czechoslovakia.

CZECH REPUBLIC

Government policies affecting consumption and production.

1. **Goals and Agents (Stakeholders)**

Indicate with a (X) those agents which your Governments policies are meant most to influence.

Goals \ Agents	Producers	Local authorities	Central Government	Households	Civil society
Material efficiency	x		x		x
Energy efficiency:					
Transport					
Housing					
Other	x		x		
Waste:					
Reduce	x	x	x	x	
Reuse	x	x	x	x	
Recycle	x	x	x	x	

Comments:

2. Means & Measures and Agents (Stakeholders)

Indicate with an (R) those agents who assume primary responsibility for any of the policy measures indicated; indicate with an (I) the agents for which the impact is expected to be especially significant.

Means & Measures / Agents	Producers	Local authorities	Central Government	House-holds	Civil Society
Improving understanding and analysis					
Information and education (e.g., radio/TV/press)	I	I/R	R	I	R
Research	R	I	R	I	I
Evaluating environmental claims	I	R	R	R/I	R
Form partnerships		R/I	R/I	I	R
Applying tools for modifying behaviour					
Community based strategies		R	R		R
Social incentives/disincentives (e.g., ecolabelling)	I		R	I	
Regulatory instruments	I		R	I	
Economic incentives/disincentives	I		R	I	
Voluntary agreements of producer responsibility for aspects of product life cycle	R			I	R
Provision of enabling facilities and infrastructure (e.g., transportation alternatives, recycling)		R	R	I	I
Procurement policy		R	R		
Monitoring, evaluating and reviewing performance					
Action campaign	R	R		I	R
Other (specify)					

Comments:

AGENDA 21 CHAPTER 5: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY

NATIONAL PRIORITY: To prevent the population growing old

STATUS REPORT:

The Czech Republic has a population of 10.3 million. Some 13.3% of the population is over 64 years old, and 18.3% is under 15 (1996). The high mortality rate of men and their previously high rate of migration has led to a disproportionate number of women and especially elderly widows. Mean life expectancy in the Czech Republic has been rising continually since the year 1960 when observation began.

In the view of the Government, population growth and fertility levels are too low; the Government would intervene to raise these rates.

CZECH REPUBLIC

Cross-Sectoral Issues

1. **Decision-Making Structure:** No information.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** Demographical Society of Academy of Science CR.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS

	1990	1993	1994	1995	Latest 1996	
Population (Thousands) mid-year estimates	10,363	10,331	10,336	10,331	10,315	
Annual rate of increase (1990-1993)	0.1	0.3	-1.0	-2.1	-2.2	
Surface area (Km^2)	78,864	78,864	78,864	78,864	78,866	
Population density (people/Km^2)	131.4	131.0	131.0	131.0	131.0	
Other data Population by age group, 1990-1996. Population estimates to 2020 in CR. Mean life expectancy in the CR according to sex, 1960-1996.						

Population estimates

Future domestic demand for the results of individual economic activities will be shaped by the expected number of inhabitants. The In 1995, the Czech Statistical Office prepared projections of the expected number of inhabitants up to 2020, which comprise two variants, high and low.

Both variants show a decreasing number of inhabitants, which is mainly due to the negative natural increment. Decreasing population figures are expected in spite of the positive migration number (approximately 10,000 immigrants are expected yearly).

Expected development of inhabitants in the Czech Republic (low and high variant)

	1995	2000	2005	2010	2015	2020
	1	2	3	4	5	6
total number, low v.	10321804	10265473	10153026	10001157	9780799	9505395
total number, high v.	10321810	10278358	10208010	10107149	9989244	9851249

As can be seen from the table and the chart, the total number of inhabitants in the Czech Republic will have decreasing trends in both forecasted variants and it means that the total domestic demand (*ceteris paribus*) for the results of economic activities will also have a decreasing tendency. But this decreasing domestic consumption will probably be paralyzed by several other factors, like increasing consumption per head or the high necessity of increasing the level of exporting activities.

AGENDA 21 CHAPTER 6: PROTECTING AND PROMOTING HUMAN HEALTH

NATIONAL PRIORITY: Primary prevention in the context of primary health care system

STATUS REPORT:

The health care system in the Czech Republic has been reconstructed since 1989. Over 20,500 independent health care centres have replaced the regional National Health Institutes administered and financed by the State. At the same time, a health insurance system was introduced, and private doctors signed contracts with these insurance companies. The Medical Chambers were founded, and pharmacies and spas were privatized followed by other facilities. Quality standards for health services were set at a level compatible with that of Western Europe. A well functioning system of epidemiological services evolved into the present State in 1952, and cooperating closely with primary health care services, has led to a remarkable reduction in communicable diseases. One of the priority objectives of the State Environmental Policy (1995) is to develop a comprehensive system for the assessment of environmental and health risks associated with human activities. By Government Decree No. 369/1991, a system to monitor air pollution, drinking water quality, noise pollution, food, toxic substances in human tissue and genotoxicity, was established to measure the impact of different environmental hazards on human health with the prime objectives to outline the corrective measures aimed at both improvement of the environment quality and health status of the population in question. In 1993, this system was implemented in 30 districts with a budget of CZK 174 million.

The National Health Restoration and Promotion Programme was adopted by the Government in 1991. On the basis of this document, a National Health Programme was adopted outlining the long-term strategic goals reflecting the objectives of the WHO "Health For All by 2000" adopted by member countries in Alma Ata, and later updated for Europe in 1984. To support activities in connection with the above programme encompassing 12 project areas, the Czech Government has been allocating about CZK 35 million annually since 1993.

The Integrated Non-communicable Diseases Intervention Programme (CINDI[1], WHO) seeks to lower morbidity and mortality by focusing on non communicable and metabolic chronic diseases through behavioural changes and community-based activities aimed at definition of population groups at risk.

The Teplice Research Programme assisted by the EU PHARE programme, is intended to improve the health of the inhabitants of the Teplice region exposed to the extremely damaged environment.

Several Czech towns participate in the WHO Healthy Towns programme - a complex community based-programme with the objective to improve the health of town inhabitants through their involvement in environment and health projects which address the specific problems of town inhabitants.

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[1] Countrywide Integrated Noncommunicable Diseases Intervention.

Cross-Sectoral Issues

1. **Decision-Making Structure:**
   The Ministry of Health, Ministry of Environment, National Institute of Public Health and the Institute of Experimental Medicine, Medical Faculty and Hygienic Services, are responsible for the decision-making and implementation under Chapter 6.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:**
   Since 1992, the main source of finance for the health care services has been contributions from employees (4.5% of earnings) and employers (9% of earnings). The State pays for people who are not earning, i.e. children, students, the unemployed, women on maternity leave and soldiers. See also Status Report.

5. **Regional/International Cooperation:** See Status Report.

STATISTICAL DATA/INDICATORS

	1980[1]	1990[1]	1994	1995	Latest 1996	
Life expectancy at birth						
Male	67.0	67.6	69.5	70.0	70.4	
Female	74.1	75.2	76.6	76.9	77.3	
Infant mortality (per 1000 live births)	20.9	10.8	7.9	7.7	6.0	
Maternal mortality rate (per 100000 live births)	9.24	7.60	6.57	2.08		
Access to safe drinking water (% of population)	100	100	100	100	100	
Access to sanitation services (% of population)	100	100	100	100	100	
Other data						

[1] Former Czechoslovakia.

AGENDA 21 CHAPTER 7: PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT

NATIONAL PRIORITY: Social conditions for a free housing market

STATUS REPORT:

Before 1989, the dominant principle of socialist planning was the need to level out regional differences in industrialization, urbanization and living standards. In the attempt to achieve a degree of equality among different areas and, at the same time, an overall increase in the level of industrialization, particular support was given to the development of heavy industry. This increased the pressure on the environment, especially in the mining and heavily industrialized areas. Major investments in energy production led to a general backwardness in the service sector, and to a lack of development of technical infrastructure. These developments resulted in a shift of growth to smaller and peripheral centres. Coal basin areas were favoured over the metropolitan areas.

Since 1989, because of the political and economic changes, there has been a slow rise in regional differences in economic efficiency and economic attractiveness.

With regard to housing policies in the Czech Republic, there is no balance between the regional allocation of housing and the needs of the workforce because the regulatory interventions of the socialist State were particularly prominent in this area. For example, only since 1995 has it been possible to adjust rents according to the size and location of the municipality. This has resulted in a very limited and uneven housing market and in a flourishing black market. The lack of a clearly conceived State and municipal housing policy together with the lack of support for construction activities has led to a significant decline in the construction of apartments.

According to a survey conducted in 1994, some 41% of the population considered the growing expenditures on housing the greatest difficulty.

Cross-Sectoral Issues

1. **Decision-Making Structure:** Ministry for Regional Development.

2. **Capacity-Building/Technology Issues:** District offices, rural offices.

3. **Major Groups:** Protection of Tenants Association, Householders Association.

4. **Finance:** State subsistence for construction activities for individual housing and municipal housing.

5. **Regional/International Cooperation:** No cooperation.

STATISTICAL DATA/INDICATORS

	1990	1995	
Urban population in % of total population	64.9	65.4	
Annual rate of growth of urban population (%)	0.2	0.1	
Largest city population (in % of total population)	11.7	11.7	
Other data			

[1] over 5,000 inhabitants.

[2] over 1 million inhabitants.

AGENDA 21 CHAPTER 8: INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING
(See pages vii and viii at the beginning of the profile)

NATIONAL PRIORITY: Improve integration of environment in decision-making.

STATUS REPORT:

The interministerial Commission for Sustainable Development and International Cooperation resulted from restructuring in November 1996 of the original Czech National Commission on Sustainable Development (CN CSD) which had been established in 1994 by uniting the former Commission for International Relations and the Advisory Board of the Deputy Minister and Director of Section on Environmental Policy – both bodies of the MoE CR. The Commission has sixteen members and is chaired by the Deputy Minister and the Director of Section of Environmental Policy, Mr. V. Bizek. Among its responsibilities are the development of state environment policy, issues related to economic instruments, education and public awareness, and the organization of workshops in cooperation with the United Nations Commission on Sustainable Development.

In 1990, the first national environmental policy document in the Czech Republic, the Rainbow Programme, was formulated. Subsequently, new institutions were established, a complex system of environmental legislation adopted, and new economic instruments introduced. In 1995, the State adopted a State Environment Policy, prepared by the Ministry of the Environment in close cooperation with other ministries, NGO's, academic and other relevant institutions. The new strategy identifies several priority levels of sustainability based on the following principles: (I) the precautionary principle; (2) the polluter-pays principle; (3) the technical feasibility principle; (4) the substitution principle; and (5) the critical load principle. Priorities are divided into short-term (up to the year 1998), medium-term (1999-2005); and long-term (2005), as follows:

Short-term priorities

- Improving air quality through further reduction of harmful emissions;
- Improving water quality by limiting pollution discharges;
- Reduction of the production of waste, especially hazardous waste;
- Eliminating the impact of harmful physical and chemical factors;
- Remedying previous environmental damage ("old burdens").

The evaluation of the quality of the environment in the CR between 1989 and 1994 indicates that, from a geographical perspective, the priority problem areas (hot spots) continue to be concentrated in Norther Bohemia, Northern Moravia and in the Capital City of Prague.

Medium-term priorities:

- Creating land use provisions safeguarding efficient protection of the individual components of the environment;
- Increasing the water retention capacity of land;
- Continued reclamation of areas devastated by extensive mining activities.

Long-term priorities:

- Climate protection;
- Protection of the Earth's ozone layer;
- Conservation and reestablishing biological diversity and thus renewing the ecological equilibrium of the landscape.

Priorities in science and technology and in the area of foreign relations can be further distinguished.

The principal strategic goals of the State Environment Policy are (1) to reach by the year 2005 the level of environmental quality reached by Western Europe in 1990, and (2) to reach a level comparable to Western Europe by the year 2015. The State Environmental Policy will be updated regularly on the basis of the National Performance Review, published annually in the Czech Republic.

Between 1990 and 1995, fourteen new acts, numerous amendments and dozens of other legal provisions were adopted and enacted to establish a system of normative, economic, institutional and informational instruments to protect the environment in the Czech Republic. *Inter alia,* Act No. 17/1992 on the protection of the environment provides the basic notions and principles in this respect. Obligations related to environmental impact assessment (EIA) are provided in the Act of the Czech National Council No. 244/1992 regarding environmental impact assessments. The law provides obligations and procedures for buildings and structures, but provisions relating to the assessment of products, plans and transboundary impacts are not clearly defined. Council Directive 96/61/EC concerning integrated pollution prevention and control is also implemented. Current legislation covers the most important areas of environmental protection more or less likely effectively. There are deficiencies in providing uniform terminology.

The Ministry of Environment of the Czech Republic is the central body for state administration in environmental matters. District authorities, municipalities and local authorities are responsible for administrative duties. The administration is complemented by special state administration bodies, including the Czech Inspection of the Environment, bodies providing administrative functions for the regional nature reserves and protected areas, and bodies overseeing the operation of national parks. These state and local administration bodies draw advice and support from various institutions such as the Czech Hydrometeorological Institute, the Water Research Institute, the Agency for Nature Conservation and Landscape Protection, the Czech Ecological Institute, Geofund and the Research Institute of Ornamental Gardening.

The Commission for the Environment of the Czech Academy of Sciences contributes to a more extensive application of scientific knowledge in the forming of future environmental policies in the spirit of Agenda 21. This Commission has twenty-five members from universities, academic and research institutes and the Ministry of the Environment. It was established in the 1970's and restructured in 1989.

The Charles University Environment Centre, led by the first environment minister, Professor B. Moldan, concentrates its activity almost completely on problems of sustainability implementation, primarily in the fields of strategy, indicators of sustainable development, and philosophy.

The Society for Sustainability Living, founded in 1993, is an NGO with several hundreds of member and which engages in ecological problems and associated disciplines in the spirit of the Rio agreements. The Czech Business Council for Sustainable Development, founded also in 1993, is a body established by a number of Czech industrial companies. Its primary mission is to become a leading business advocate for issues regarding sustainable development, to demonstrate and share progress achieved in environmental management in businesses, and finally, to spread results achieved in environmental protection, energy efficiency, sustainable resource management and to prevent air, water and soil pollution as well as waste production.

Cross-Sectoral Issues

1. **Decision-Making Structure (please also refer to the fact sheet):** The Ministry of Environment is the central body for State administration in environmental matters. Czech Environment Inspection Agency.

2. **Capacity-Building/Technology Issues:** Czech Environmental Institute, and Charles University Environmental Centre.

3. **Major Groups:** NGOs, civic associations and scientific communities were consulted by the Ministry of Environment during the preparation of the State Environmental Policy in 1994 - 1995.

4. **Finance:** Implementation of environmental policies is financed from the State budget, the State Environment Fund, and the National Property Fund. The private sector and foreign assistance are also important funding sources. (For more information, see Chapter 33.)

5. **Regional/International Cooperation:** The Czech Republic is a signatory to the most important international conventions for environmental protection, and has met the obligations and commitments of these conventions. Bilateral environmental agreements have been concluded with 11 countries and additional agreements are being negotiated.

AGENDA 21 CHAPTER 9: PROTECTION OF THE ATMOSPHERE

NATIONAL PRIORITY:

STATUS REPORT:

The Montreal Protocol and its Amendments

- Montreal Protocol (1987) ratified.
- London Amendment (1990) ratified.
- Copenhagen Amendment (1992) signed in 1996.
- The latest report(s) to the Montreal Protocol Secretariat were prepared in 1996

United Nations Framework Convention on Climate Change.

See annex.

- UNFCCC was ratified.
- The latest report to the UNFCCC Secretariat was submitted in 1997.

Additional comments relevant to this chapter:

During 1990-1994, the production of energy has shifted from the use of fossil to renewable fuels, although coal and lignite are still the most important sources of energy in the Czech Republic (59% in 1992). Consequently, the relative output of the energy industry in producing emissions has fallen. Air pollution is still considered to be the number one environmental problem in the country. Therefore, an Air Recovery Programme has been adopted and measures to reduce emissions are being implemented in most large coal-burning power stations. Some units have been shut down. Gasification projects in municipalities are proceeding rapidly.

In the transport sector, the number of motor vehicles rose by 30% between 1989 and 1994, and internal and inter-State transport has increased. At the same time, the growth in sales of unleaded petrol, and the reduction in levels of lead in regular petrol have resulted in a reduction of approximately 75% in lead emissions. In addition, 7-8% of motor vehicles were equipped with catalytic converters in 1994.

The restructuring of the industrial sector, namely outdated plants, has also resulted in reduction of emissions. Since 1986, the consumption of ozone depleting substances has decreased by 88%. Current legislation stimulates industry to take remedial measures and to invest in environmental improvements. Emission limits have also been established by law, and the 1998 deadline for compliance with prescribed emission limits is projected to be met by approximately 75% of polluters. However, the provisions concerning air pollution are inadequate in providing sufficient incentives for industries to reduce emissions and/or introduce pollution control techniques. In addition, the national economy continues to demand more energy. Coal and all kinds of energy sources are subject to a reduced level of value added tax, and the prices of energy and energy carriers are very cheap. Incentives to encourage energy saving and to apply modern energy efficiency technology are also inadequate.

Automatic continuous monitoring systems for measurement of the three main pollutants (sulphur dioxides, carbon monoxides and nitrogen oxides) have been installed in the three most polluted areas (North Bohemia, Prague, Ostrava). Detailed information on pollution levels are given daily by the two national TV channels.

[1] Note: The Air Recovery Programme is financed thorough special governmental subsistence of CZK 6 billion for air pollution abatement from small individual sources of pollution.

Cross-Sectoral Issues

1. **Decision-Making Structure:** Ministry of the Environment - Air Protection Department; Protection of the air against pollution is provided by Act No 309/1991 (amended by Act No. 211/1994) and Act No. 389/1991 (amended by Act No. 212/1994) on State administration for air protection and air pollution charges; protection of the ozone layer is governed by Act No. 86/1995.

2. **Capacity-Building/Technology Issues:** See Status Report.

3. **Major Groups:** Society for Sustainable Living and other NGOs.

4. **Finance:** Between 1990 and 1994, approximately 40% of all environmental expenditures were spent on air pollution control (on equipment to reduce emissions and to reconstruct power plants). The State Environment Fund supports investment projects on air pollution control through direct allocations and soft loans. In 1997, the National Property Fund will transfer CZK 6.1 billion to the State Environment Fund to support the Air Recovery Programme.

5. **Regional/International Cooperation:** Cooperation was evolving with the Regional Office for Europe, especially in relation to the international projects within the Framework Convention on Climate Change (1994). Cooperation continues with the World Meteorological Organization (Global Ozone Observing system, Global Atmosphere Watch). The Protocol to the 1979 Convention on Long-range Transboundary Air Pollution on Further Reduction of Sulphur Emissions was signed as well as an Agreement between the Czech Republic, Germany and Poland on Emission Data Exchange.

STATISTICAL DATA/INDICATORS

	1980	1990	1995	Latest 1996
CO_2 emissions (eq. million tons)	196	193	123	
SO_x "	2.26	1.88	1.09	0.95
NO_x "	0.94	0.74	0.41	0.43
CH_4 "		21.8	18	
Consumption of ozone depleting substances (Tons)[1]			384	0
Expenditure on air pollution abatement in US$ equivalents (million)[2]		47.8	499.6	
Other data	Consumption of ozone depleting substances (Tons)			

[1] CFC - 11, 12, 113, 114, 115

[2] Investment expenditure
1 US$ = 27 CZK

Annex: The Czech Republic's Second Communication on the National Process to comply with the commitments under the UN Framework Convention on Climate Change.

AGENDA 21 CHAPTER 10: INTEGRATED APPROACH TO THE PLANNING AND MANAGEMENT OF LAND RESOURCES

NATIONAL PRIORITY: Programme for Renewal of Rural Areas

STATUS REPORT: One of the priorities of the State Environmental Policy (1995) is to create land use provisions which will safeguard the efficient protection of the individual components of the environment (water, soil, forest, climate), and fulfil international commitments through regional planning. The Programme for Renewal of Rural Areas emphasizes the development of the economies of municipalities, construction renewal, construction of civic and technical infrastructure and also care for the landscape. In the framework of this programme, emphasis is placed on the necessity of preparing a suitable strategy (preparation of territorial plans of urban studies and local renewal programmes) which must precede the actual implementation of the local programmes.

Cross-Sectoral Issues

1. **Decision-Making Structure:** The Ministry of Environment, Ministry of Agriculture, Ministry for Regional Development, Ministry of Transport and Communication.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** Society for Sustainable Living and other NGOs; Commission for the Environment of the Academy of Science of CR.

4. **Finance:** State budget, State Environmental Fund, foreign aid.

5. **Regional/International Cooperation:** No information.

AGENDA 21 CHAPTER 11: COMBATING DEFORESTATION

NATIONAL PRIORITY: The improvement of ecological stability of forests.

STATUS REPORT:

Forests cover 33% of the country's territory (2,631,000 ha) and these areas are increasing (see other data). Of the forest territory, some 43% has been classified as protective forest area and special purpose areas. Forest in large-scale and small-scale protected areas covers approximately 27% of the forest area.
Most of the forest areas had to be logged due to emission damage since 1958. In 1994, 63% of the forest area was damaged; in 1995, 61.6%; in 1996, 59.7%. Most of the resulting clearings have been reforested. The threat to forests has seemingly diminished after the logging of the destroyed areas on the North Bohemian mountain ranges and the reduction of emissions of sulphur compounds, through the health of forest vegetation, dropped further at some sites.

Act No. 289/1995 Coll., on forests, creates the legal framework for balanced management of all the functions of forests. The Act stipulates the obligation of reforestation of clearings within two years.

A programme of afforestation of agricultural land began in 1994. In the framework of the programme subsidized within the restructuring of plant production (total amount CZK 65 million) 1,516 ha were afforested during 1994-1996. In some areas damaged by emissions, foundations developed which subsidize regeneration of forests.

State Forest Policy was approved by the Government in 1994.

Cross-Sectoral Issues

1. **Decision-Making Structure:** The Ministry of Agriculture and the Ministry of Environment. The protection of the forests and forest management are provided by Act No. 289/1995 on forests.

2. **Capacity-Building/Technology Issues:** Forests of CR, Institute for Economic Forest Management, Forestry and Game Management Research Institute, Czech Environment Inspection Agency.

3. **Major Groups:** National Forest Committee, Society for Sustainable Living, Scientific - technological Society for Forestry, ProSilva.

4. **Finance:** State Agricultural and Forest Subsidence Fund. Financing of reforestation in areas with high emission load.

5. **Regional/International Cooperation:** Bilateral agreements with Germany and Austria.

STATISTICAL DATA/INDICATORS

	1985	1990	1994	1995	Latest 1996	
Forest Area (Km^2)	26,260	26,290	26,290	26,300	26,310	
Protected forest area[1]		10,940	11,330	11,256	11,256	
Roundwood production (solid volume of roundwood without bark in mill m^3)		13.33	11.95	12.37		
Deforestation rate (Km^2/annum)	no deforesta-tion	without recompen-sation				
Reforestation rate (Km^2/annum)			0.3	0.57	0.65	
Other data Trend of forest land area Afforestation/reforestation, 1991 - 1996						

[1] Protective forests and special purpose forests.

AGENDA 21 CHAPTER 12: MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT

NATIONAL PRIORITY: No information.

STATUS REPORT:

International Convention to Combat Desertification in Countries Experiencing Drought and/or Desertification Particularly in Africa

Additional comments relevant to this chapter

The Czech Republic is preparing to accede to the convention. Czech experts are prepared to help developing countries in the sphere of pedology, hydrology, etc.

Cross-Sectoral Issues

1. **Decision-Making Structure:** N/A.

2. **Capacity-Building/Technology Issues:** N/A.

3. **Major Groups:** N/A.

4. **Finance:** N/A.

5. **Regional/International Cooperation:** N/A.

STATISTICAL DATA/INDICATORS

	1980	1990	Latest 199	
Land affected by desertification (Km^2)				
Other data				

AGENDA 21 CHAPTER 13: MANAGING FRAGILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT

NATIONAL PRIORITY: The maintenance of the quality of fragile ecosystems.

STATUS REPORT:

Most of the mountainous areas are part of protected areas - national parks, protected landscape areas, watershed areas with retention water management functions, biosphere reserves, core areas of EECONET.

Mountainous areas are wooded areas, forests are damaged by emissions (see Chapter 11). Agriculture is subsidized - i.e. maintenance of the cultural condition through agricultural land fund. Recreational activities do not yet exceed the acceptable levels, except for the Krkonose National Park. An estimate of the number of visitors to Krkonose National Park is 8 million per year. Eco-tourism is been developed.

The Krkonose and Sumava Biosphere Reserves are taking part in the Global Environmental Facility financed project, through the World Bank. The main objective of the project is to develop effective management techniques and model conservation programmes that would effectively address increasing threats, and allow control of the number of visitors.

Subsidies were provided from the State budget for the following measures: protection of the landscape against erosion, preservation and reinforcing species biodiversity, increasing the retention capacity of land, etc. in the framework of Programme of Conservation of the Landscape and Programme for Revitalization of River Systems.

Cross-Sectoral Issues

1. **Decision-Making Structure:** Ministry of Agriculture, Ministry of the Environment, Ministry for Regional

2. **Capacity-Building/Technology Issues:** Krkonose National Park Administration, Sumava National Park Administration, Administration of the Protected Landscape Areas

3. **Major Groups:** Society for Sustainable Living and other NGOs.

4. **Finance:** State budget, State Environment Fund.

5. **Regional/International Cooperation:** Bilateral agreements with Germany and Austria, cooperation with Poland.

STATISTICAL DATA/INDICATORS

AGENDA 21 CHAPTER 14: PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

NATIONAL PRIORITY: Keeping agricultural production in less favoured areas (social issue), Programme for Renewal of Rural Areas

STATUS REPORT:

In 1996, the share of agricultural production in the Czech Republic stabilized at 30% of the GDP. The use of fertilizers and pesticides is at a low level (see data table) and has an impact of low profitability of agricultural production.
Negatives: pollution of surface water (nitrogen, soil from erosion) leads also to the pollution of neighbouring countries, low level of eco-stability of countryside;
Paritives: good quality of ground water, no monoculture in plant production (high biodiversity)

The share of ecological agriculture in CR in 1996 was 0.4% (17,022 ha) of total agricultural land, integrated agricultural systems are also used, mostly for vineyards (4,422 ha).

State agricultural policy does not support ecological or integrated agricultural production as such, but for social purposes (LFA) increases support for: reforestation, maintaining the landscape, pasture of beef herds without milk production, non-productive forest functions, support of less favoured areas (environmental criteria are note the aim of support).

Cross-Sectoral Issues

1. **Decision-Making Structure:** Ministry of Agriculture.
The Act on the Protection of Agricultural Soil, Fund No. 334/1992 (amended by Act No. 10/1993) concerns soil as a means of production, but does not provide measures to address environmental issues related to soil protection. A new act on soil quality protection and on water protection is being prepared.

   The Ministry of Environment and the Ministry of Regional Development run the Programme of Renewal of Rural Areas, which is focused on building investment.

2. **Capacity-Building/Technology Issues:** Czech Agricultural and Food Processing Inspection, National Agricultural Inspection and Testing Institute, National Veterinary Administration of the CR. Crop Production Research Institute, Production of renewable energy source - biodiesel - was supported by investment in processing, and is now supported by lower VAT(5%) than other fuels (22%).

3. **Major Groups:** Major groups of ecological producers: PROBIO (Association of Organic Farmers), LIBERA Other groups (NGOs, foundations, etc.) operating in - ecological agriculture: Foundation of Organic Agriculture (consulting), ADONIS (certification) - renewable energy: Association of Biodiesel Producers, League of Energetic Alternatives - regeneration of countryside: Association for the Regeneration of Countryside.

4. **Finance:** State Environment Fund, State Agricultural and Forest Subsidence Fund. The Ministry of Agriculture subsidized organic farming (benefitting the environment) and with the Ministry of the Environment the regeneration of the countryside.

5. **Regional/International Cooperation:** Since 1990, co-operation exists with the EU countries and Euroregions (programme PHARE). The Ministry of Agriculture is an accredited member of IFOAM, which the provides possibility of international certification of Czech organic products. The Czech Republic also works on the project and the European Ecological Network".

There is co-operation between Czech and foreign associations of organic agriculture (e.g. PROBIO and BIOLAND (Germany) and between FAO and similar organizations in European countries. Czech research institutes are involved in international research programmes concerning environmental issues.

STATISTICAL DATA/INDICATORS

	1980	1990	Latest 1996
Agricultural land (Km^2)	43,740	42,880	42,790
Agricultural land as % of total land area		54	54
Agricultural land per capita		0.41	0.40
	1989/90	**1992/93**	**Latest 199**
Consumption of fertilizers per Km^2 of agricultural land as of 1990			
Other data: Consumption of fertilizers (kg per ha)			

Slozka	1989	1990	1991	1992	1993	1994	1995	1996
N	103,2	86,3	46,6	46,7	40,0	57,6	55,6	61,3
P_2O_5	67,1	52,5	10,8	10,8	13,0	10,3	14,6	11,8
K_2O	59,7	47,2	8,6	8,6	10,5	13,0	12,8	8,0
CaO	661,7	616,9	163,3	60,7	47,9	54,0	75,4	75,0

Source: MZe, VUZE

AGENDA 21 CHAPTER 15: CONSERVATION OF BIOLOGICAL DIVERSITY

NATIONAL PRIORITY: Complete territorially connected network of EECONET

STATUS REPORT:

Convention on Biological Diversity - signed and ratified in 1993.

Convention on International Trade in Endangered Species of Wild Fauna and Flora
- ratified. Latest report submitted in 1995.

Additional comments relevant to this chapter

The biological diversity in the Czech Republic has been markedly reduced due to industrial pollution, large-scale farming and unfavourable agricultural practices with heavy use of chemicals. Therefore, conservation of biological diversity is considered one of the priorities of the State Environmental Policy. During 1999-2005, the primary targets will be to protect biodiversity by minimizing harmful impacts, revitalizing biotopes and protecting and reintroducing endangered indigenous species.

Due to some improvements in agricultural practices, biological diversity is gradually improving in the Czech Republic. Many invertebrates and birds are reappearing. New hedgerows, bush game refuges and green areas have been established to divide ploughed fields and to limit the extent of erosion of agricultural land. Consequently, the number of game animals has increased.

An important element of the Czech nature protection strategy is the system of protected areas: national parks (1,103 km^2), protected landscape areas (10,416 km^2), national nature reserves (264 km^2), national nature monuments (27 km^2), nature reserves (257 km^2) and nature monuments (276 km^2). The establishment of national parks is provided by Government decree.

Another important element of the strategy is the legislation to have been amended by the end of 1996. The current Act on Nature and Landscape Protection (114/1992) does not provide economic instruments to encourage nature protection. The legislation will be reassessed to harmonize the legitimate interests of nature conservation and appropriate forms of economic activity, and to provide under the law the control of trade in endangered and protected animal and plant species in accordance with the CITES Convention. The Act emphasizes the territorial system of ecological stability which represents the national ecological network; the System is connected with the European Ecological Network; subsidies were provided from the state budget for the following measures: protection of the landscape against erosion, preservation and reinforcing of species biodiversity, increasing the retention capacity of land etc., in the framework of the Programme of Conservation of the Landscape and the Programme for Revitalization of River Systems.

Cross-Sectoral Issues

1. **Decision-Making Structure:** See Status Report.

2. **Capacity-Building/Technology Issues:** Agency for Nature Conservation and Landscape Protection, Protected Landscapes Administration, Czech Environmental Inspection.

3. **Major Groups:** Society for Sustainable Living, Czech Union of Nature Conservation.

4. **Finance:** State Environment Fund, foreign aid.

5. **Regional/International Cooperation:**
CR signed the Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Convention on the Conservation of Migratory Species of Wild Animals, Agreement on the Conservation of Bats in Europe. Bilateral cooperation develops with Germany and other European countries.

STATISTICAL DATA/INDICATORS

	1992	Latest 1996	
Protected area as % of total land area	15	15	
	1990	**Latest 1996**	
Number of threatened species	505[1]	809[2]	
Other data			

[1] According to Decree No. 54/1958 and No. 80/1965
[2] According to Decree of the Ministry of the Environment of the CR No. 395/1992
By the Czech methodology, which is different from international standards.

AGENDA 21 CHAPTER 16: ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY

NATIONAL PRIORITY: The new legislation on GMO

STATUS REPORT:

Specific plans to promote the use of traditional and modern technologies are in process. Methodical guidelines for biotechnology safety mechanisms were prepared in 1994 and they are updated periodically. The law on genetically modified organisms is in the preparatory stage.

The use of living organisms in any biotechnological processes must be permitted by the Ministry of Health, and the rules applied are very strict. Working with any health endangered organisms needs special permission and strict rules must be followed; monitoring takes place regularly.

A bioremediaton working group was established. Many private firms have been established dealing with microbial decontamination of polluted waters and soils.

Cross-Sectoral Issues

1. **Decision-Making Structure:** Ministry of Agriculture, Ministry of the Environment, Ministry of Health.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** Commission for the Environment of the Academy of Science of CR, Society for Sustainable Living and others NGOs.

4. **Finance:** During the last few years the Grant Agencies in the Czech Republic have supported many biotechnologically and environmentally directed projects.

5. **Regional/International Cooperation:** Multilateral initiative EUREKA.

STATISTICAL DATA/INDICATORS

AGENDA 21 CHAPTER 17: **PROTECTION OF THE OCEANS, ALL KINDS OF SEAS, INCLUDING ENCLOSED AND SEMI-ENCLOSED SEAS, AND COASTAL AREAS AND THE PROTECTION, RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES**

NATIONAL PRIORITY:	
STATUS REPORT: **The UN Convention on the Law of the Sea - signed.** See also the attached tables on the next pages. Not applicable for CR.	

Cross-Sectoral Issues	
1. **Decision-Making Structure:** 2. **Capacity-Building/Technology Issues:** 3. **Major Groups:** 4. **Finance:** 5. **Regional/International Cooperation:**	

STATISTICAL DATA/INDICATORS				
	1980	1990	Latest 199-	
Catches of marine species (metric tons)				
Population in coastal areas				
Population served by waste water treatment (% of country's total population)				
Discharges of oil into coastal waters (metric tons)				
Releases of phosphate into coastal waters (metric tons)				
Releases of nitrate into coastal waters (metric tons)				
Other data				

Chapter 17 (Oceans) Continued:

Check the boxes in the column below left:
For level of importance use:
*** = very important
** = important
* = not important
N = not relevant

Check the boxes in the column below
For level of implementation use:
*** = fully covered
** = well covered - gaps being addressed
* = poorly covered
O = not covered
N = not relevant

TABLE I. THE FOLLOWING ACTIVITIES HAVE BEEN CONSIDERED BY THE APPROPRIATE COORDINATING MECHANISM FOR INTEGRATED MANAGEMENT AND SUSTAINABLE DEVELOPMENT OF COASTAL AND MARINE AREAS AND THEIR RESOURCES.

LEVEL OF IMPORTANCE	ACTIVITY AS DESCRIBED IN AGENDA 21	LEVEL OF IMPLEMENTATION
	A. Preparation and implementation of land and water use and siting policies.	
	B. Implementation of integrated coastal and marine management and sustainable development plans and programmes at appropriate levels.	
	C. Preparation of coastal profiles identifying critical areas including eroded zones, physical processes, development patterns, user conflicts and specific priorities for management.	
	D. Prior environmental impact assessment, systematic observation and follow-up of major projects, including systematic incorporation of results in decision-making.	
	E. Contingency plans for human induced and natural disasters.	
	F. Improvement of coastal human settlements, especially in housing, drinking water and treatment and disposal of sewage, solid wastes and industrial effluents.	
	G. Periodic assessment of the impacts of external factors and phenomena to ensure that the objectives of integrated management and sustainable development of coastal areas and marine environment are met.	
	H. Conservation and restoration of altered critical habitats.	
	I. Integration of sectoral programmes on sustainable development for settlements, agriculture, tourism, fishing, ports and industries affecting the coastal areas.	
	J. Infrastructure adaptation and alternative employment.	
	K. Human resource development and training.	
	L. Public education, awareness and information programmes.	
	M. Promoting environmentally sound technology and sustainable practices.	
	N. Development and simultaneous implementation of environmental quality criteria.	

TABLE II. TECHNOLOGY (MARINE ENVIRONMENT)

LEVEL OF IMPORTANCE	ACTIVITY AS DESCRIBED IN AGENDA 21	LEVEL OF IMPLEMENTATION
	A. Apply preventive, precautionary and anticipatory approaches so as to avoid degradation of the marine environment, as well as to reduce the risk of long-term or irreversible adverse effects upon it.	
	B. Ensure prior assessment of activities that may have significant adverse impacts upon the marine environment.	
	C. Integrate protection of the marine environment into relevant general environmental, social and economic development policies.	
	D. Develop economic incentives, where appropriate, to apply clean technologies and other means consistent with the internalization of environmental costs, such as the polluter pays principle, so as to avoid degradation of the marine environment.	
	E. Improve the living standards of coastal populations, particularly in developing countries, so as to contribute to reducing the degradation of the coastal and marine environment.	
	F. Effective monitoring and surveillance within the exclusive economic zone (EEZ) of fish harvesting and transportation of toxic and other hazardous materials.	

TABLE III. SEWAGE RELATED ISSUES

LEVEL OF IMPORTANCE	ACTIVITY AS DESCRIBED IN AGENDA 21	LEVEL OF IMPLEMENTATION
	A. Sewage related problems are considered when formulating or reviewing coastal development plans, including human development plans.	
	B. Sewage treatment facilities are built in accordance with national policies.	
	C. Coastal outfalls are located so as to maintain acceptable level of environmental quality and to avoid exposing shell fisheries, water intakes and bathing areas to pathogens.	
	D. The Government promotes primary treatment of municipal sewage discharged to rivers, estuaries and the sea, or other solutions appropriate to specific sites.	
	E. The Government supports the establishment and improvement of local, national, subregional and regional, as necessary, regulatory and monitoring programmes to control effluent discharge. Minimum sewage effluent guidelines and water quality criteria are in use.	

TABLE IV. OTHER SOURCES OF MARINE POLLUTION, THE GOVERNMENT HAS:

LEVEL OF IMPORTANCE	ACTIVITY AS DESCRIBED IN AGENDA 21	LEVEL OF IMPLEMENTATION
	A. Established or improved upon, as necessary, regulatory and monitoring programmes to control emissions, including recycling technologies.	
	B. Promoted risk and environmental impact assessments to help ensure an acceptable level of environmental quality.	
	C. Promoted assessment and cooperation at the regional level, where appropriate, with respect to the input of point source pollutants from the marine environment.	
	D. Taken steps to eliminate emissions or discharges of organohalogen compounds from the marine environment.	
	E. Taken steps to eliminate/reduce emissions or discharges or other synthetic organic compounds from the marine environment.	
	F. Promoted controls over anthropogenic inputs of nitrogen and phosphorous that enter coastal waters where such problems as eutrophication threaten the marine environment or its resources.	
	G. Taken steps to develop and implement environmentally sound land-use techniques and practices to reduce run-off to water courses and estuaries which would cause pollution or degradation of the marine environment.	
	H. Promoted the use of environmentally less harmful pesticides and fertilizers and alternative methods for pest control, and considered the prohibition of those found to be environmentally unsound.	
	I. Adopted new initiatives at national, subregional and regional levels for controlling the input of non-point source pollutants which require broad changes in sewage and waste management, agricultural practices, mining, construction and transportation.	
	J. Taken steps to control and prevent coastal erosion and siltation due to anthropogenic factors related to, inter alia, land-use and construction techniques and practices.	

TABLE V. ADDRESSING CRITICAL UNCERTAINTIES FOR THE MANAGEMENT OF THE MARINE ENVIRONMENT AND CLIMATE CHANGE. IN ORDER TO IMPLEMENT THIS PROGRAMME AREA THE GOVERNMENT IS CARRYING OUT THE FOLLOWING ACTIVITIES:

LEVEL OF IMPORTANCE	ACTIVITY AS DESCRIBED IN AGENDA 21	LEVEL OF IMPLEMENTATION
	A. Coordinating national and regional observation programmes for coastal and near-shore phenomena related to climate change and for research parameters essential for marine and coastal management in all regions.	
	B. Providing improved forecasts of marine conditions for the safety of inhabitants of coastal areas and for the efficiency of marine operations.	
	C. Adopting special measures to cope with and adapt to potential climate change and sea-level rise.	
	D. Participating in coastal vulnerability assessment, modelling and response strategies particularly for priority areas, such as small islands and low-lying and critical coastal areas.	
	E. Identifying ongoing and planned programmes of systematic observation of the marine environment, with a view to integrating activities and establishing priorities to address critical uncertainties for oceans and all seas.	
	F. Research to determine the marine biological effects of increased levels of ultraviolet rays due to the depletion of the stratospheric ozone layer.	
	G. Carrying out analysis, assessments and systematic observation of the role of oceans as a carbon sink.	

TABLE VI. RATING OF ACTIVITIES IN THE AIR AND MARITIME TRANSPORT SECTORS IN THE SMALL ISLANDS DEVELOPING STATES (SIDS)

AIR TRANSPORT	RATING	MARITIME TRANSPORT	RATING
1. Frequency (external flights)		1. Frequency (external shipping)	
2. Frequency (in-country flights)		2. Frequency (in-country shipping)	
3. Cooperation at regional level in air transport and civil aviation		3. Cooperation at regional level in shipping	
4. Cooperation at international level		4. Cooperation at international level	
5. Economic viability of national air line		5. Economic viability of national shipping line(s)	
6. Economic viability of regional air line		6. Economic viability of regional shipping line (s)	
7. National level training in skills for air transport sector		7. National level training in skills for maritime transport sector	
8. Access to training in skills for air transport sector within the region		8. Regional level training in skills for maritime transport sector	
9. Access to international training for air transport sector		9. Access to international training for maritime transport sector	
10. Supportive of ICAO			

CZECH REPUBLIC

AGENDA 21 CHAPTER 18: **PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE DEVELOPMENT, MANAGEMENT AND USE OF WATER RESOURCES**

NATIONAL PRIORITY: Improve water quality and watershed management

STATUS REPORT:

Waters represent 2% of the total land area of the Czech Republic. One of the primary objectives of the State Environmental Policy is to reduce the pollution of ground and surface waters. Special attention is paid to the protection of drinking water resources and to the further reduction of BOD5, heavy metals and specific organic compounds, i.e. substances which have a detrimental impact on human health.

Due to massive investments in the waste water treatment plants during 1993-1995, the waste discharged into rivers is decreasing. The new reductions placed on chemical production plants and more efficient treatment of waste water have contributed to a significant reduction in the concentration of toxic substances in surface waters. For example, the total amount of BOD has decreased by 40%. It is envisaged that by the year 2000, all cities and towns with more than 5,000 inhabitants will have a waste water plant.

On the other hand, the quality of drinking water withdrawn from the surface waters has neither improved nor deteriorated. People are aware of health risks and consume bottled water. The quality of drinking water is assessed in accordance with the WHO Guidelines for Drinking Water Quality.

The Czech Hydrometeorological Institute carries out assessments of surface and ground water resources. It also installs and runs a network of hydrological, meteorological and climatic stations, as well as air quality stations. In 1994, there were 505 surface water and 2,550 groundwater observation stations. The indicators primarily used to measure water quality are the following: the registered number of sources of pollution; the registered length of water courses; the length of severely and excessively polluted rivers, and the amount of sewage and impurities released to rivers.

Cross-Sectoral Issues

1. **Decision-Making Structure:** The Ministry of Environment with its regional offices, the Czech Inspection of the Environment and the State Environment Fund are responsible for decision-making under this chapter. The Czech Hydrometeorological Institute carries out assessments of surface and ground water resources. The State Water Inspection measures water quality indicators, and the results are published annually.
   Protection of waters and the provisions related to water management are provided by Act No. 138/1973, Act No. 425/1990 and Act No. 114/1995.

2. **Capacity-Building/Technology Issues:** Czech Environment Inspection Agency, T.G. Masaryk Water Management Research Institute.

3. **Major Groups:** Society for Sustainable Living and other NGOs.

4. **Finance:** The water management sector is characterized by a rather complicated system of charges and prices of supplied water and water treatment. Charges are levied on water withdrawn from surface water reservoirs and from underground sources. They are generally low (CZK 2/m^3; US$ 0.077), and there are many exemptions. Other charges are levied on all waste waters discharged into water courses. The revenues from waste water charges are part of the State Environmental Fund's budget, and in 1994 they amounted to CZK 976 million (US$ 37.5 million). The water management is heavily subsidized from the national budget. In 1993, a total of CZK 2,777,000 (US$ 106,800,000) was allocated to this sector. In addition, some CZK 1,672,000 (US$ 64,300,000) was used from the State Environmental Fund for this purpose.

5. **Regional/International Cooperation:** The Czech Republic cooperates closely with its neighbouring countries in the field of utilization of frontier river courses. Bilateral agreements have been signed with Poland, Austria, Germany and Slovakia.

The Czech Republic has sent experts on the management and planning of water resources to the developing countries of Africa and Asia.

UNDP finances a project (CEH/93/01/007/99) on the economic implications of various measures.

STATISTICAL DATA/INDICATORS

	1980	1990	Latest 1995	
Fresh water availability (total domestic/external in million m^3)		5,057	7240	
Annual withdrawal of freshwater as % of available water		67	34	
Other data				

CZECH REPUBLIC

AGENDA 21 CHAPTER 19: ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS

NATIONAL PRIORITY: Reduce risk from chemicals by complying with EU standards and legislation.

STATUS REPORT:

In 1994, the principal problem for the environmentally sound management of toxic chemicals in the Czech Republic was inadequate legislation and its incompatibility with the legislation of the European Union. The laws did not contain testing requirements for the environmental toxicity of chemicals, and there were no laws on good laboratory practices. Neither did the legislation provide necessary protection measures concerning the transport of chemical substances. There was also an unclear division of labour and decision-making among different authorities, and there were no registration and notification practices. The existing limits were not based on thorough risk assessments and testing.

The Ministry of the Environment was reviewing and revising the legislation in 1994. The aim was to register and regulate chemicals discharged into the environment, to anticipate their impact on the environment, and to set new limits. At that time, the Law on Chemicals was being amended to better cover the interlinkages of environment and health. The proposal to establish a legal and institutional framework for the management of chemical substances was also presented to the Government in 1994.

With regard to the collection of data, a national information center has been established under the auspices of the Ministry of Environment. An inventory of existing chemical compounds was conducted in 1993-1994 with the help of the 500 - 600 principal producers, importers and customs offices.

One of the future priorities of the State Environmental Policy will be to complete the environmental risk assessment system for toxic chemicals and to create a regulatory framework for their use, including transboundary movement. At this time, the Act on Chemicals is to be prepared. The bill is fully harmonized with EU and OECD standards.

Cross-Sectoral Issues

1. **Decision-Making Structure:** The Hygienic Services Department of the Ministry of Health is responsible for the protection of human health and a healthy working environment. The Ministry of Environment is responsible for the management of toxic chemicals and hazardous wastes and provides technical help. The Ministry of Agriculture is responsible for pesticide problems.

   The laws governing this issue are the following: the Act on Human Health (20/1966), the Government Regulation on Poisons and Some Other Compounds Harmful to Human Health (192/1988 and 182/1990), Regulation on Principles of Treating Chemical Carcinogens (64/1984), and the Act on the Treatment and Examination of Some Kinds of Commodities and Technologies (547/1990). The registration of pesticides is governed by the Act on the Expansion of Plant Production (61/1964).

2. **Capacity-Building/Technology Issues:** A national information centre has been built under the auspices of the Ministry of Environment with support from the EU PHARE Programme.

   The national counterpart of the IRPTC (International Register of Potentially Toxic Chemicals) maintains contacts with the IRPTC, and harmonizes national databases with it. The most important national databases in the field are the following: CHEMBANK, IRIS, TOXLINE, HEADSET, EINECS, and IRPTC.

   A network of laboratories specialized in chemicals has been created with the help of the EU PHARE Programme and Suisse Fund.

3. **Major Groups:** The Union of Chemical Industries and large manufacturers collaborate closely with the State authorities in the management of toxic chemicals and hazardous wastes.

4. **Finance:** Lack of funds slows down the development of legislation, purchasing databases, training of specialists, testing of chemicals, risk assessment, development of analytical instruments (mainly for ecotoxicology) and computerization.

5. **Regional/International Cooperation:** In the management of toxic chemicals, the Czech Republic cooperates with UNEP, UNO[1], and takes part in the IRPTC.

STATISTICAL DATA/INDICATORS

[1] United Nations Organization.

CZECH REPUBLIC

AGENDA 21 CHAPTER 20: ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTES, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN HAZARDOUS WASTES

NATIONAL PRIORITY: Reduce risk from hazardous wastes by complying with the EU legislation and standards and the Basel Convention.

STATUS REPORT:

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

- **Basel Convention**
- signed in 1991; ratified in 1993.

- The latest information was provided to the Basel Convention Secretariat in 1997.

Additional comments relevant to this chapter

In 1991, some 180 million tons of waste were generated in the Czech Republic. Of this amount, some 5.4 million tons were hazardous waste. The Waste Management Act (238/1991) implements the goals of the Basel Convention to a great extent, although there is not full conformity with the Czech Catalogue of Wastes (Vol. 69/1991). In the Czech Republic, wastes are classified as special and other waste. Special waste, which is pollutant or which has significant hazardous properties for human beings or for the environment, can also be classified as hazardous waste.
In 1995, the Czech Republic was drafting a new Waste Management Act. Within the framework of the new act, the country intends to introduce an objective system to determine measurements of waste toxicity (and its categorization), to harmonize the waste classifications with the EU policies, and to introduce a differentiated approach to the handling of hazardous wastes. In addition, the new Waste Management Act includes measures to simplify the administrative regime of the hazardous waste transport and to bring it into harmony with the general rules regarding the transport of dangerous substances. The new Act will also ensure that the provisions for the transboundary movement of secondary raw materials and wastes complies with EU and OECD standards (red, amber and green lists).

See also Chapter 21.

Cross-Sectoral Issues

1. **Decision-Making Structure:** The Ministry of the Environment is responsible for the management of toxic chemicals and hazardous wastes. The Ministry of Agriculture is responsible for problem of pesticides. The State Institute for Health Protection and the Czech Environmental Institute also take part in the decision-making. The laws and regulations dealing with the management of hazardous waste are the following:
   - Waste Management Act (238/1991) prohibiting the import of hazardous waste for disposal;
   - Act 238/1991 C.B. (§ 3, Section 4, a-d) requires the approval of the Ministry of the Environment for the import of any wastes destined for recovery and recycling operations;
   - Act 238/1992 C.B.
   - (§ 3, Section 4) regulates the export of hazardous and other waste and requires the approval of the Ministry of Environment. It is limited to PCB wastes and old herbicides, because treatment capacity is not available in the country; - Measures of the Federal Committee of the Environment promulgating the categorization and catalogue of wastes, Volume 69/1991; and
   - Communication No. 100/1994 on the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.
   - Decree of the Government of the Czech Republic on Details of Waste Handling
2. **Capacity-Building/Technology Issues:** There is not enough capacity for the treatment of hazardous waste.
3. **Major Groups:** Society for Sustainable Living and other NGOs.
4. **Finance:** Private sector, State Environmental Fund
5. **Regional/International Cooperation:** Bilateral agreements

STATISTICAL DATA/INDICATORS

	1980	1990	Latest 1995	
Generation of hazardous waste (t)			959,916	
Import of hazardous wastes (t)			519	
Export of hazardous wastes (t)			1,925	
Area of land contaminated by hazardous waste (km^2)				
Expenditure on hazardous waste treatment (US$)				
Other data				

CZECH REPUBLIC

AGENDA 21 CHAPTER 21: ENVIRONMENTALLY SOUND MANAGEMENT OF SOLID WASTES AND SEWAGE-RELATED ISSUES

NATIONAL PRIORITY: The minimization, sorting and reuse of wastes

STATUS REPORT:

There were 85.7 million tons of wastes generated in the CR in 1995. In 1995, there were 1270 landfills and 90 incineration plants in operation. However, only 294 of them operated under valid legal provisions and only 50 incineration plants met valid emission limits. In addition, there were 95 operational recycling facilities as well as 27 composting plants in 1995.

In 1995, 73% of the population was connected to public sewage systems. As of 1994, some 84.5 % of the waste water in public sewage systems was at least partially treated before being discharged.

The present legal norms concerning waste management proceed from the 1991 Act on Waste Management (238/1991) and do not comply with the relevant standards issued by the EU and OECD. In addition, these laws do not provide adequate incentives to encourage waste minimization. Existing economic instruments such as waste disposal charges often encourage undesirable types of waste disposal (unsorted landfilling), and do not encourage waste producers to collect and recycle the waste. Many waste producers are unable to make the necessary investments in environmental technologies, and this inability is further hampered by their financial obligation to pay waste disposal charges. In addition, the transboundary movement of secondary raw materials is controlled according to Basel Convention. The CR legislation is stricter than the European Standards in some aspects because all wastes or secondary raw materials are controlled.

The new Waste Management Act No. 125/ 1997 Coll. effective 1 January 1998, was being drafted to meet the deficiencies of these laws. For example, the local authorities will be given more responsibilities in waste management.

Cross-Sectoral Issues

1. **Decision-Making Structure:** The laws and regulations dealing with the management of hazardous waste are the following:

   - Waste Management Act (238/1991), amended by Act No. 300/19
   - Act. No 311/1991 on the State Administration of Waste Management, amended by Act. 466/1992;
   - Act No. 62/1992 on the charges for landfilling of waste, amended by Act No. 41/1995;
   - Decree No. 521/1991 on the maintenance of records on waste;
   - Decree No. 513/1992 on the details of waste handling;
   - Decree No. 401/1991 of the Ministry of Environment on Waste Management Programmes;
   - Measures of the Federal Committee of the Environment promulgating the categorization and catalogue of wastes, Volume 69/1991;
   - Communication No. 100/1994 on the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

2. **Capacity-Building/Technology Issues:** Czech Environmental Institute

   The information Center on wastes develops and operates a Waste Information System for decision management nd legislative activity of the Ministry of Environment.

3. **Major Groups:** Society for Sustainable Living and other NGOs.

4. **Finance:** Private sector, State Environmental Fund.

5. **Regional/International Cooperation:** Bilateral agreements.

STATISTICAL DATA/INDICATORS

	1980	1990	Latest 1995	
Generation of industrial and municipal waste (t)			40,544,200	
Waste disposed(Kg/capita)				
Expenditure on waste collection and treatment (US$)				
Waste recycling rates (%)				
Municipal waste disposal (Kg/capita)			250	
Waste reduction rates per unit of GDP (t/year)				
Other data				

CZECH REPUBLIC

AGENDA 21 CHAPTER 22: SAFE AND ENVIRONMENTALLY SOUND MANAGEMENT OF RADIOACTIVE WASTES

NATIONAL PRIORITY: Temporary deposition of radioactive wastes

STATUS REPORT:

Sound management of radioactive wastes is provided by Act No. 18/1997 (Atomic Act). The structure of Radiation Monitoring Network, see annex.

Cross-Sectoral Issues

1. **Decision-Making Structure:** The Ministry of Environment
   Act No. 18/1997
   Decree of the CR Atomic Energy Office No. 67/1987 on the provision of nuclear safety in handling radioactive waste
2. **Capacity-Building/Technology Issues:** See annex.
3. **Major Groups:** Society for Sustainable Living and other NGOs.
4. **Finance:** No information.
5. **Regional/International Cooperation:** Bilateral agreements.

STATISTICAL DATA/INDICATORS

AGENDA 21 CHAPTERS 23-32: MAJOR GROUPS

The role of major groups are also covered under the various chapters of Agenda 21. The following is a summary of main objectives outlined in Agenda 21. Please check the appropriate boxes and describe briefly any important steps or obstacles.

STATUS REPORT ON PARTICIPATION BY MAJOR GROUPS AT THE NATIONAL AND LOCAL LEVELS

Ch. 24: GLOBAL ACTION FOR WOMEN TOWARDS SUSTAINABLE AND EQUITABLE DEVELOPMENT.

The Convention on the Elimination of All Forms of Discrimination Against Women was
- ratified on 22 February 1993.

24.a Increasing the proportion of women decision makers.

- Percentage of women in government: 0 (1992); - (1994); 0 (1996);
- Percentage of women in parliament: 9.5 (1992); - (1994); 14 (1996);
- Percentage at local government level: 0 (1992); 17.9 (1994); - (1996).

24.b Assessing, reviewing, revising and implementing curricula and other educational material with a view to promoting dissemination of gender-relevant knowledge.
Curricula and educational material
- already promote gender relevant knowledge.

24.c and 24.d Formulating and implementing policies, guidelines, strategies and plans for achievement of equality in all aspects of society including issuing a strategy by year 2000 to eliminate obstacles to full participation of women in sustainable development. Policies/strategies etc. - have been drawn up/completed.

24.e Establishing mechanisms by 1995 to assess implementation and impact of development and environment policies and programmes on women
- mechanisms are in place.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

Since 1918, the equal rights of women were stated in the Constitution of the CR.

CZECH REPUBLIC

STATUS REPORT ON PARTICIPATION BY MAJOR GROUPS AT THE NATIONAL AND LOCAL LEVELS

Ch. 25: CHILDREN AND YOUTH IN SUSTAINABLE DEVELOPMENT.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

25.a Establishing processes that promote dialogue between the youth and government at all levels and mechanisms that permit youth access to information and opportunity to present their views on implementing A21.

Describe their role in the national process:

25.b Reducing youth unemployment - full participants
Youth unemployment[1]: 23,428 (1992); 20,399 (1995).

25.c Ensuring that by year 2000 more than 50% of youth -- gender balanced -- have access to appropriate secondary education or vocational training.
- the goal set in Agenda 21 has been reached.

There are various activities of children and youth concentrated on environmental problems, some of them nationaly coordinated; these are not called Agenda 21. There are many NGOs (e.g. Czech Nature Conservation Federation, Brontosaurus Movement, Association of Brontosaurus, etc. There are ecocentres here too. Some of the appropriate activities are provided by youth groups (special clubs).

STATUS REPORT ON PARTICIPATION BY MAJOR GROUPS AT THE NATIONAL AND LOCAL LEVELS

Ch. 26: RECOGNIZING AND STRENGTHENING THE ROLE OF INDIGENOUS PEOPLE AND THEIR COMMUNITIES.

Not applicable for CR.

Ch. 27: STRENGTHENING THE ROLE OF NON-GOVERNMENTAL ORGANIZATIONS: PARTNERS FOR SUSTAINABLE DEVELOPMENT.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

The administration is complemented by special state and local administration bodies which draw advice and support from various institutions such as the Czech Hydrometeorological Institute, the Water Research Institute, the Agency for Nature Conservation and Landscape Protection, the Czech Ecological Institute, Geofund and the Research Institute of Ornamental Gardening.

The Commission for the Environment of the Czech Academy of Sciences contributes to a more extensive application of scientific knowledge in the forming of future environmental policies in the spirit of Agenda 21. This Commission has twenty-five members from universities, academic and research institutes and the Ministry of the Environment. It was established in the 1970's and restructured in 1989.

The Charles University Environment Centre, led by the first environment minister, Professor B. Moldan, concentrates its activity almost completely on problems of sustainability implementation, primarily in the fields of strategy, indicators of sustainable development, and philosophy.

The Society for Sustainable Living, founded in 1993, is an NGO with several hundreds of members and which engages in ecological problems and associated disciplines in the spirit of the Rio agreements. The Czech Business Council for Sustainable Development, founded also in 1993, is a body established by a number of Czech industrial companies. Its primary mission is to become a leading business advocate for issues regarding sustainable development, to demonstrate and share progress achieved in environmental management in businesses, and finally, to spread results achieved in environmental protection, energy, efficiency, sustainable resource management and to prevent air, water and soil pollution as well as waste production.

STATUS REPORT ON PARTICIPATION BY MAJOR GROUPS AT THE NATIONAL AND LOCAL LEVELS

Ch. 28: LOCAL AUTHORITIES' INITIATIVES IN SUPPORT OF AGENDA 21.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

In the CR, there exist several enlightened local authorities which strive to manage their community in an environmentally-sustainable way, e.g., in Děčin (especially sustainable energy sources), Žďár and Sázavou (waste management), Český Krumlov (environment management in a town proclaimed by UNESCO as a site with worldwide importance as a culture and historical heritage), Mikulov (in cooperation with environmentally-oriented NGO's -- development of ecotourism in a transboundary area). Most of these towns do not exceed 50,000 inhabitants.

A number of NGO's asking for support from the Ministry of the Environment are active in developing local agenda on the implementation of sustainability principles, especially in the field of ecological education and raising public awareness, nature conservation and sustainable development as a whole (e.g., Czech Union of Nature Conservation - Branch Veronica in Brno).

An important information measure for local management of environmental and sustainability problems is the translation and publishing of the "Guide to Environmental Management for Local Authorities in Central and Eastern Europe", by the International Environmental Agency for Local Governments (ICLEI). This compendium comprises about eighteen volumes covering all relevant aspects of the issues, based on the application of Agenda 21.

Ch. 29: STRENGTHENING THE ROLE OF WORKERS AND THEIR TRADE UNIONS.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

29.a full participation of workers in implementation and evaluation of A21.

29.b (By year 2000, (a) promoting ratification of ILO conventions; (b) establishing bipartite and tripartite mechanism on safety, health and sustainable development; ® increasing number of environmental collective agreements; (d) reducing occupational accidents and injuries; (e) increasing workers' education and training efforts.
- ILO Conventions have been ratified; workers take some part in National Agenda 21 decisions/implementation.

Ch. 30: STRENGTHENING THE ROLE OF BUSINESS AND INDUSTRY.

The Society for Sustainable Living, founded in 1993, is an NGO with several hundreds of members and which engages in ecological problems and associated disciplines in the spirit of the Rio agreements. The Czech Business Council for Sustainable Development, founded also in 1993, is a body established by a number of Czech industrial companies. Its primary mission is to become a leading business advocate for issues regarding sustainable development, to demonstrate and share progress achieved in environmental management in businesses, and finally, to spread results achieved in environmental protection, energy efficiency, sustainable resource management and to prevent air, water and soil pollution as well as waste production.

CZECH REPUBLIC

STATUS REPORT ON PARTICIPATION BY MAJOR GROUPS AT THE NATIONAL AND LOCAL LEVELS

Ch. 31: SCIENTIFIC AND TECHNOLOGICAL COMMUNITY.

31.a Improving exchange of knowledge and concerns between s&t community and the general public. Scientific community has already established ways in which to address the general public and deal with sustainable development.

31.b Developing, improving and promoting international acceptance of codes of practice and guidelines related to science and technology and its role in reconciling environment and development.

Brief comments on this chapter not already described in chapter 35 (maximum 100 words) (please, do not exceed this page):

Commission for the Environment of the CR Academy of Science concentrates on principles of SD; lectures on the environment are given to 17 university faculties.

Ch. 32: STRENGTHENING THE ROLE OF FARMERS.

32.a Promoting and encouraging sustainable farming practices and technologies.

32.b Developing a policy framework that provides incentives and motivation among farmers for sustainable and efficient farming practices.

32.c Enhancing participation of organizations of farmers in design and implementation of sustainable development policies.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

State Agricultural Policy emphasizes the role of farmers. A Programme on Ecoagronomy was prepared.

AGENDA 21 CHAPTER 33: FINANCIAL RESOURCES AND MECHANISMS

Financial resources and mechanisms are also covered under each sectoral chapter of Agenda 21 where relevant. This summary highlights broader national financial policies, domestic and external (including ODA)

NATIONAL PRIORITY: To increase the efficiency of environmental funds.

STATUS REPORT:

In the Czech Republic, implementation of environmental policies is funded from the State budget, the State Environment Fund, the National Property Fund, Private and Semiprivate funds, and Foreign Aid. The State Environment Fund supports investment projects for water and air pollution control through direct allocations and soft loans. The National Property Fund assists in addressing problems associated with previously damaged sites. From 1992-1996, the expenditures for the National Property Fund reached CZK 2 billion. From 1994- 1997, CZK 6.1 billion was transferred to the State Environment Fund to support the Air Recovery Programme.

The role of the private and semi-private sector in environmental funding has increased, although the lack of medium and long-term credit and the demand for State guarantees by many international financial institutions still has a negative impact on the potential growth of the sector. Project investments indicate that the total annual expenditures of the private sector will exceed CZK 10 billion annually between 1994 and 1998. In the period 1990 - 1996, foreign aid represented merely CZK 12 billion, of which 7 billion was a World Bank loan to CEZ for emission abatement in coal power plants, and CZK 2.34 billion for PHARE programmes. In the period after 1994, the technical aid has been substituted by investments and this trend will continue in the near future.

The costs of compliance with the present legal norms for air and water protection and waste management - the three priorities of the State Environmental Policy - are estimated to be at the level of CZK 400 billion. The costs to restore the most seriously damaged sites, including the former Soviet military sites, are estimated to exceed CZK 56 billion. According to the Ministry of the Environment, the total expenditures, both public and private, should remain at the present level until the year 2000, and these levels should reach at least CZK 25 billion per annum (in current prices). The Environmental Remediation Programme was launched in 1993, and in the period 1993 to 1996, 473 projects were supported in a total amount of 372.4 million CZK (about 10.5 million USD). The main purpose of this programme is to support projects which serve the MoE in its decision-making. The MoE also supports projects in the framework of the programme, "Science and Research", which began in 1993 with four main branches: (1) environmental risk assessment; (2) complex research of water and watersheds; (3) nature conservation and landscape protection; a nd (4) geology.

In addition, support is given annually to about 180 NGO projects, chosen from about 600 applications. In 1996, this amounted to approximately 17.1 million CZK (about 0.5 million USD), ten percent of which was directly linked to the implementation of sustainable development projects.

CHANGES IN NATIONAL BUDGETS TO ADDRESS SUSTAINABLE DEVELOPMENT:

The environmental expenditures from the State Budget soared during the initial transformation and restructuring period (CZK 3.3 billion in 1990; CZK 7.8 billion in 1991; CZK 10.8 billion in 1992), and are now decreasing (CZK 8.5 billion in 1995). Between 1990 and 1994, approximately 45% of all environmental expenditures in the Czech Republic were spent on water pollution control (mainly on the construction of waste water treatment plants), and roughly 40% was spent on air pollution control (on the development and construction of equipment to reduce emissions and towards the reconstruction of power plants, in particular).

In the period 1992-1996, the expenditures from the State Environmental Fund reached a total amount of CZK 20 billion. After 1998, total incomes are expected to decrease due to the expected decrease of incomes from emission charges. The State Environmental Fund is focussed mainly on municipal and communal investments on water and air protection by means of subsidies and soft loans. The National Property Fund assists, within the privatization process, in addressing problems associated with previously damaged sites. In the period 1992-1996, CZK 109.6 billion were guaranteed by the State to privatized enterprises, and CZK 2 billion were paid. In 1997, the same amount of CZK 2 billion was expected to be paid.

NEW ECONOMIC INSTRUMENTS:

The current system of economic instruments is based on the use of charges. There are charges for disposing of waste water in the surface waters; charges for releasing harmful emissions into the air; charges for landfilling of waste; charges for the requisitions of agricultural land; and charges for the withdrawal of groundwater. Revenues from these charges are allocated to the State Environment Fund, which uses them to provide soft loans and grants to finance environmental projects in municipalities and SMEs. In addition to these charges, tax relief and allocations from the State Budget are granted for products and activities meeting environmentally friendly criteria.

Pollution charges, as established under the previous legislation, were determined without a thorough economic analysis of the relevant costs, and no provisions were included to index these charges to inflation. As a result, the revenue derived from pollution charges represents less than 20% of the total annual expenditure for environmental protection. Other types of instruments to promote waste recycling such as recycling premiums or deposit-refund systems have not been adequately utilized.

ELIMINATION OF ENVIRONMENTALLY UNFRIENDLY SUBSIDIES:

The tax relief structure to promote environmentally friendly behaviour has not been well coordinated with other policies, and as a result, in some cases, it has conflicted with the intended objectives. The Government also faces the problem of making good restituted agricultural properties.

CZECH REPUBLIC

ODA policy issues

STATISTICAL DATA/INDICATORS						
	1992	**1993**	**1994**	**1995**	**1996**	
ODA funding provided or received (Total US$million)						
	Average for 92-93		**Average for 94-96**			
Net flow of external capital from all sources as % of GDP						

Other data

If ODA means any kind of international financial aid directed toward the Czech environmental sector, then the following can be said: the total level of such international financial support is rather hard to calculate due to the absence of integrated statistical data. From the existing incomplete statistical information (Environmental Year-Books of the Czech Republic) it is possible to estimate that in the early 90s, the total annual aid from advanced countries and from PHARE funds created approximately US$20-50 million. This represented approximately 0.1-0.2 % of GDP. Although this official aid from a financial viewpoint is rather marginal, it has had quite a substantial influence in orienting the country toward a cleaner environment.

CZECH REPUBLIC

AGENDA 21 CHAPTER 34: TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY, COOPERATION AND CAPACITY-BUILDING

Transfer of environmentally sound technology, cooperation and capacity-building is also covered under each sectoral chapter of Agenda 21 where relevant. This summary highlights broader national policies and actions relating to chapter 34.

NATIONAL PRIORITY: The implementation of environmentally sound technology

STATUS REPORT ON LINKS BETWEEN NATIONAL, REGIONAL AND INTERNATIONAL INFORMATION NETWORKS/SYSTEMS:

MEANS OF IMPLEMENTATION:

In the framework of Phase I of implementation of measures to improve the air quality in the Czech Republic, new, imported air-protection technology is being brought into operation to comply with the requirements set forth by Act No. 212/1994 Coll. on State administration of air protection and fees for air pollution; this technology has been approved by the Czech Environmental Inspection agency for use within the territory of the Czech Republic.

The following technical facilities have been brought into operation:

Equipment for sulphur removal from energy-production combustion equipment with the semi-dry sulphur removal method and separation of solid pollutants, produced by the Austria Energy and Environment SGP/Wagner Biro GmbH company in Austria; equipment with fluid-bed sulphur-removal technology in a sorbent fluid bed, produced by the Lurgi Energie und Umwelt GmbH company in FRG; atmospheric circulation fluid-bed furnace, produced by the Foster Wheeler Energia OY company in Finland; equipment employed for the combustion of solid fuels with the optional addition of alkaline additive, equipped with an electrostatic separator of solid particles from the combustion products, produced by the FLS Miljo a/s company in Denmark, AFB equipment for atmospheric fluid-bed combustion of solid and additive fuels equipped with a fluid-bed firebox and separator of solid substances from the combustion products, produced by the Combustion Power Company; equipment fitted with technology for purification and sulphur-removal from the combustion products by the wet method - using an aqueous suspension of finely ground limestone, for energy-production facilities burning solid and liquid fuels without output limitation, from the Asea Brown Boveri company; equipment employing two-step limestone scrubbing to purify combustion products from combustion of solid communal waste; equipment equipped with wet-dry combustion purification technology for combustion products from combustion of solid communal waste using a calcium hydroxide suspension; equipment fitted with combustion-product purification technology for combustion of solid communal waste using the method of conditioned dry sorption on a mixture of dry calcium hydrate and additive coke, equipped with a filter for removing the sorbent with selective catalytic reduction of nitrogen oxide; equipment with technology for purification of the combustion products from the combustion of special and especially hazardous waste by the method of wet-dry sorption on a suspension of finely ground limestone and additive coke in combination with wet limestone scrubbing and selective catalytic reduction of nitrogen oxides, all produced by the Noel-KRC Umwelttechnik GmbH company in FRG.

- **Describe any work being undertaken at the national or local level regarding efforts to promote clean production processes and/or the concepts of eco-efficiency. These processes may include training, preferential financial arrangements, information dissemination and changes in legal or regulatory frameworks.**

  The Czech Cleaner Production Center is a non-governmental, non-profit and independent organization. The Center is playing a catalytic and coordinating role in promoting cleaner production in CR by: providing training, implementing demonstration projects, providing policy advice, providing advice on financing mechanisms and being a source of information.

- **Provide information on the adoption of environmental management systems. National reaction to environmental management system standards such as the ISO 14000 Series and others. Please note efforts made at the national level to promote their adoption and the creation of certification infrastructure in order to facilitate access to these standards to local industry.**

  The wide application of ISO 14 000 and EMAS procedures.

- **List and describe programs or work under way to facilitate the transfer of ESTs to small and medium sized enterprises. Please note efforts to facilitate access to financial resources and other transfer strategies.**

CZECH REPUBLIC

AGENDA 21 CHAPTER 35: SCIENCE FOR SUSTAINABLE DEVELOPMENT

NATIONAL PRIORITY:

STATUS REPORT ON NATIONAL SCIENTIFIC KNOWLEDGE, RESEARCH NEEDS AND PRIORITIES:

Since 1989, research and development have undergone considerable structural and budgetary changes. In 1990, the central planning of research was abolished, but the Academy of Sciences has been preserved as an institution financed from the State budget. The institutes of the Academy of Sciences are much better equipped than the universities. In 1993, the Grant Agency of the Czech Republic was founded to ensure equal access by all researchers to funding sources, regardless of their status in the organization. The privatization process has led to an increase in investments by industry in R & D.

STEPS TAKEN TO ENHANCE SCIENTIFIC UNDERSTANDING, IMPROVE LONG TERM SCIENTIFIC ASSESSMENT, BUILDING OF CAPACITY AND CAPABILITY:

Recently, the scientific capacity of the Czech Republic is in the process of transformation. Research is developing, especially in universities.

STATISTICAL DATA/INDICATORS

	1985	1990	1992	1993	1994	1995
Number of scientists, engineers and technicians engaged in research and experimental development	77,680	62,268	31,543	23,336	23,741	37,151
Total expenditure for research and experimental development (US$eq.)		978.4	1,109.9	1,008.3	1,019.5	1,130.1
of which from State budget		279.8	241.2	231.1	271.1	359.2

AGENDA 21 CHAPTER 36: PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING

NATIONAL PRIORITY: See other data.

STATUS REPORT:

The objective of environmental education and public awareness-raising in the Czech Republic is to change attitudes and behavioural patterns as a means to establish the necessary preconditions to gradually remove normative and economic instruments. So far, no comprehensive system of environmental education or education of sustainable development has been established, and there is no legislative or institutional support to establish such a system. Education in schools is lagging due to insufficient teacher training and inadequate teaching material, including books.

In the Czech Republic, society as a whole recognizes the importance of public awareness-raising and education in the promotion of sustainable development. There is an extensive nationwide network of centres for environmental training run by various organizations.

a) **Reorientation of education towards sustainable development**

There is no national curriculum. Environmental education is included in the curricula of elementary teaching, science and local/national history and geography. In middle school and the first years of secondary school, it is a part of the biology instruction, geography and civics, as well as the optional subject, environmental practicals, and other subjects such as chemistry and the humanities. Headmasters have a choice between the traditional and an alternative (more environmental links focused) syllabus of science. Environmental education and instruction in grammar school is a part of the classes in biology, geography and other natural sciences and the humanities. Some secondary schools of environmental orientation and programs of college studies on the environment and its protection, ecology, landscape and nature conservation, etc., have emerged in the last few years.

Studies on the environment and ecology are a part of virtually all the college programs today and most universities and colleges, and a large number of faculties have established special departments on environment-related studies. There are offers to include training of new teachers in such studies.

A project financed by the Ministry of the Environment of the CR entitled, "Education Programme for Environmentally Sustainable Development" (1 million ECU, from September 1995 to December 1996), consisted of three subprojects: (1) services for pedagogical universities; (2) preparation of text books for technical and other universities; and (3) raising public awareness. In this context, about sixty textbooks were edited and published on related issues.

b) **Increasing public awareness:**

Since 1989, public awareness on environmental issues has greatly increased. In 1990, some 83% of people regarded environmental improvement as the primary task of the Government. Since then, the public concern has gradually decreased because of the economic decline and a setback in real living standards for most social groups. Nevertheless, there are several hundred environmental NGOs, for example, which is an indication of the interest the people have in environmental issues. The media frequently reports on the quality of specific environmental issues. For example, TV weather forecasts regularly inform about air quality, particularly in the polluted regions.

c) **Promoting training:** There is no special training for adults in CR.

ROLE OF MAJOR GROUPS: See "Status Report" and "Increasing public awareness".

FINANCING AND COST EVALUATION: Some CZK 55 billion (about 11% of the total budget) was allocated from the State Budget for education in 1996. The lack of finance places limitations on teaching equipment and on teachers' salaries.

CZECH REPUBLIC

STATISTICAL DATA/INDICATORS				
	1980	1992	Latest 1996	
Adult literacy rate (%) Male			100	
Adult literacy rate (%) Female			100	
% of primary school children reaching grade 5 (1986-97)			100	
Mean number of years of schooling			10.7	
% of GNP spent on education			3.65	
Females per 100 males in secondary school			152.7	
Women per 100 men in the labour force			80.3	

Other data

The increasing of public awareness and participation, the preparation of teachers, the support of ecocentres, non-profit ecocounsellors, organizations, institutions and local authorities.

CZECH REPUBLIC

AGENDA 21 CHAPTER 37: NATIONAL MECHANISMS AND INTERNATIONAL COOPERATION FOR CAPACITY-BUILDING IN DEVELOPING COUNTRIES

National capacity building is also covered under sectoral chapters.
Donors: You may wish to describe here how Agenda 21 has influenced your ODA policies in this area.
Developing countries: You may wish to describe any new national mechanisms for capacity building - and any changes in technical cooperation.

NATIONAL PRIORITY:	
STATUS REPORT ON NATIONAL ENDOGENOUS CAPACITY BUILDING: See Chapter 2.	

AGENDA 21 CHAPTER 38: INTERNATIONAL INSTITUTIONAL ARRANGEMENTS

Ch. 38: Brief summary of any particular UN System response affecting this country/state:

The Czech Republic is a member of OECD and an associate member of EU.

AGENDA 21 CHAPTER 39: INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS

Ch. 39: International Legal Instruments are covered under the relevant sectoral chapters. This is a listing of major agreements/conventions (not already covered) entered into and relevant to Agenda 21:

Bilateral cooperation is based on agreements that were concluded in the past. Cooperation with Western and Northern countries (e.g. FRG, Austria, Denmark and France) primarily took the form of technical, consulting and investment assistance. Cooperation with FRG evolved not only at the official state level, but also at a more local level, especially with Saxony and Bavaria. The draft Agreement between the Government of the Czech Republic and the Government of the Republic of Poland on cooperation in environmental protection has been prepared and it is expected to be signed in the first quarter of 1998. Negotiations also continued with Poland on a proposal for a new agreement on cooperation in the sphere of water management along border waters. An agreement was signed between the Government of the Czech Republic and the Government of the Federal Republic of Germany on cooperation in environmental protection. The Czech Republic and the Slovak Republic signed the Protocol Implementing the Agreement between the Government of the Czech Republic and the Government of the Slovak Republic on Cooperation in the Sphere of Environmental Protection.

Cooperation with countries such as Canada, the USA and Great Britain is oriented to technical assistance in the sphere of environmental protection, in the Czech Republic.

Multilateral cooperation is closely connected with the membership of the Czech Republic in international organizations and with implementation of international conventions.

The Czech Republic is a party to the following conventions:

Convention on Long-range Transboundary Air Pollution; Protocol to the 1979 Convention on Long-range Transboundary Air Pollution on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP); Protocol to the 1979 Convention on Long-range Transboundary Air Pollution on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30 per cent; Protocol to the 1979 Convention on Long-range Transboundary Air Pollution on Further Reduction of Sulphur Emissions; Protocol to the 1979 Convention on Long-range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes; Convention for the Protection of the Ozone Layer (Vienna Convention); Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol); London Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer; Copenhagen Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer; Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention); UN Framework Convention on Climate Change; Convention on Biological Diversity; Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); Amendment to the Convention on International Trade in Endangered Species of Wild Fauna and Flora; Convention on Wetlands of International Importance Especially as Waterfowl Habitat; Protocol to Amend the Convention on Wetlands of International Importance Especially as Waterfowl Habitat; Convention on the Conservation of Migratory Species of Wild Animals (CMS); Agreement on the Conservation of Bats in Europe; Convention Concerning the Protection of the World Cultural and Natural Heritage; Agreement on the International Commission for Protection of the Elbe River; Convention on Cooperation for Protection and Sustainable Use of the Danube River; Agreement on the International Commission for Protection of the Odra/Oder River against Pollution.

AGENDA 21 CHAPTER 40: INFORMATION FOR DECISION-MAKING

This chapter is also covered under sectoral and other chapters of this profile. The matrix below gives an overview of how national authorities rate the available information for decision making.

Rating of available data and information suitable for decision-making

	Agenda 21 Chapters	Very good	Good	Some good data but many gaps	Poor	Remarks
2.	International cooperation and trade		x			
3.	Combating poverty					
4.	Changing consumption patterns		x			
5.	Demographic dynamics and sustainability		x			
6.	Human health			x		
7.	Human settlements			x		
8.	Integrating E & D in decision-making				x	
9.	Protection of the atmosphere					
10.	Integrated planning and management of land resources	x				
11.	Combating deforestation			x		
12.	Combating desertification and drought		x			
13.	Sustainable mountain development					
14.	Sustainable agriculture and rural development			x		
15.	Conservation of biological diversity			x		
16.	Biotechnology			x		
17.	Oceans, seas, coastal areas and their living resources					
18.	Freshwater resources		x			
19.	Toxic chemicals			x		
20.	Hazardous wastes			x		
21.	Solid wastes		x			
22.	Radioactive wastes		x			
24.	Women in sustainable development			x		
25.	Children and youth			x		
26.	Indigenous people					
27.	Non-governmental organizations		x			
28.	Local authorities		x			
29.	Workers and trade unions				x	
30.	Business and industry				x	
31.	Scientific and technological community			x		
32.	Farmers				x	
33.	Financial resources and mechanisms			x		
34.	Technology, cooperation and capacity-building			x		
35.	Science for sustainable development			x		
36.	Education, public awareness and training			x		
37.	International cooperation for capacity-building		x			
38.	International institutional arrangements		x			
39.	International legal instruments		x			
40.	Information for decision-making			x		

CZECH REPUBLIC

Additional Comments

Different institutes under the administration of the Ministry of the Environment carry out long-term systematic monitoring on the qualitative and quantitative aspects of environmental issues. The Czech Hydrometeorological Institute monitors atmospheric changes and water resources. The Agency for Nature Conservation and Landscape Protection monitors the state of living nature and protected areas, and the Czech Geological Institute monitors geological phenomena and small catchment areas. The Ministry of Health monitors food chains. The information gathered is used by the government administrations in decision-making processes and also by the public and NGOs. Within the framework of the SCOPE (Scientific Committee on Problems of Environment), Charles University in Prague is conducting a project to develop indicators on sustainable development. The project also studies the linkages between different aspects of sustainable development.

STATISTICAL DATA/INDICATORS

	1989	1993	Latest 1996
Number of telephones in use per 100 inhabitants	15.0	19.0	27.3

Other data